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JULY, 1909

SELLING ELECTRICITY

Edited by FRANK B. RAE, Jr.

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American Steel Clad Flatiron

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The American "Steel Clad" Electric Flatiron has ***all*** the special features which are claimed for other flatirons — and ***had them first.*** The American "Steel Clad" was better a year ago than any other iron you can buy today.

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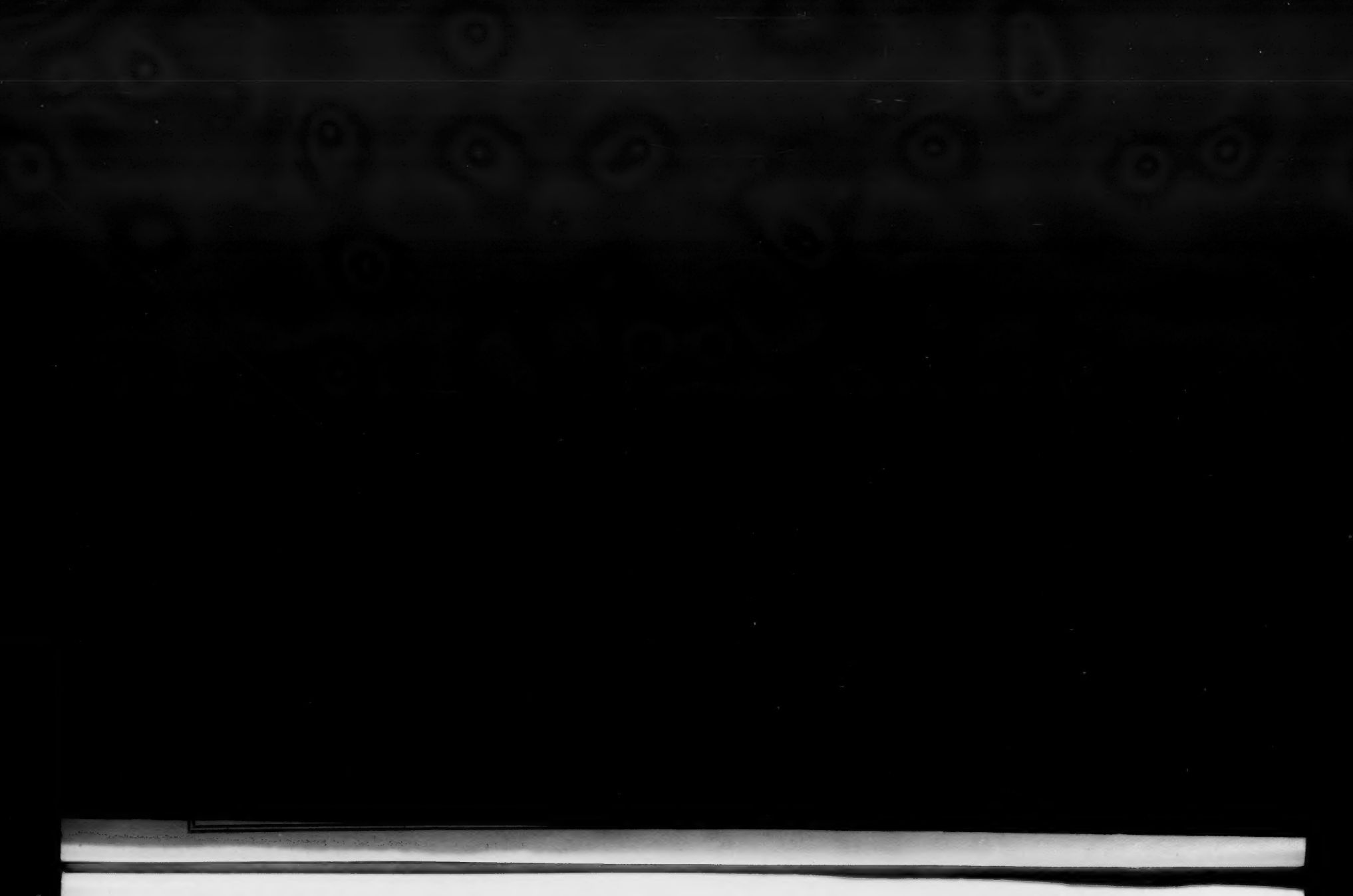

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In the C-W organization are 62 motor-drive experts ready to help you get power business. No charge

IF there is a factory within reach of your lines that is not buying power from you, we can help you secure the business. No matter what the conditions, no matter how hopeless the proposition looks, we ask you to

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Crocker-Wheeler Company

Ampere, New Jersey

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Only from experience—his own and others.

His own experience comes only with time and head work, but the experiences and achievements of his fellows are recorded in this magazine twelve times a year.

It is an opportunity to learn faster.

SELLING ELECTRICITY should be mailed to the home of every central station commercial man. It costs one dollar a year.

SELLING ELECTRICITY

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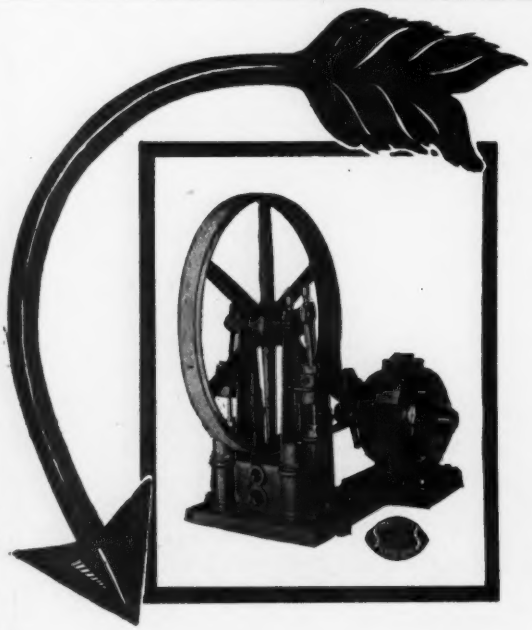

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Let us tell you how and where to sell electricity for pumping. There's profit in it if you go after it right.

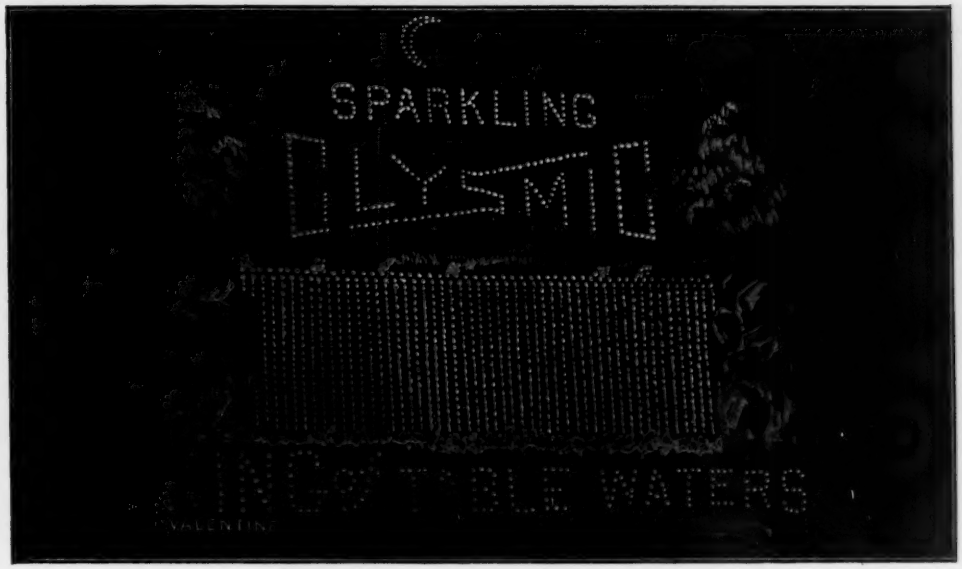
Remember, it is power load at lighting rates.

"Sanitary" Pumps are low in first cost and economical in operation. They give continuous satisfaction, and require practically no attention. "Sanitary" Pumps meet every requirement for domestic water supply, and all types can be electrically driven. Get our data and prices. They will help you close a contract some day.

Sanitary Pump Co.,

12 South Canal, Dayton, Ohio

Manufacturers of Single and Duplex Double Acting Pumps, Deep Well Heads, Rotary Pumps



VALENTINE
SELLS SIGNS FOR YOU

VALENTINE signs are too well known to require further advertisement — everybody in the central station business now knows that the name **Valentine** stands for **original and attention-compelling design, sturdy and workman-like construction, prompt delivery and right price.**

BUT

There's a more important advantage in trading with Valentine. You not only get quality in the designs, but you get the benefit of the Valentine sales policy. Let us tell you the details of our plan. It is summed up in five words—

VALENTINE
SELLS SIGNS FOR YOU

Valentine Electric Sign Company

Atlantic City, New Jersey

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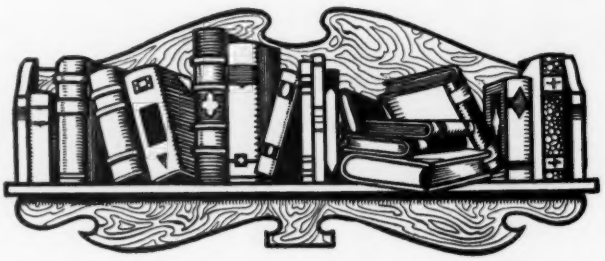

LOYALTY to the Company doesn't mean simply doing what you're told. It means doing all you can—doing it gladly, enthusiastically, continuously—doing it when nobody is about to watch you.

Be loyal.

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JUL 17 1909

SELLING ELECTRICITY

Vol. V JULY, 1909 No. 6

Some Things We Need

ONE of the most important points brought out in the Commercial Sessions of the last N. E. L. A. Convention was this:—The new business man needs more data.

So far the development of commercial departments has been based almost entirely upon salesmanship. The central station business getter has been too busy with rudimentary commercial problems, too busy organizing and systematizing and educating himself and his co-workers, too busy skimming the cream of the business which he found ready and waiting for him, too busy justifying himself and making good from day to day,—to analyze very deeply his real needs or consider his ultimate future. But for some time it has been evident that the commercial man is "finding himself." He has forgotten the past: he has the opportunity and feels it necessary to look into the future.

Practically all the business not now connected to the lines of the commercially progressive central station is business which requires more than straight salesmanship to secure. The "easy picking" is about gone. It takes a power engineer to supplant steam and gas engines and to bring foreign industries into a territory. It requires an illuminating engineer to equalize the costs of gas and electric lighting, to prevent the increase in private lighting plants and to develop the standard of illumination so that the per capita lighting income is constantly rising. It requires a man versed, not alone in the design and construction of signs, but also in flasher mechanism, advertising principles, color harmony and a thousand details, mechanical and psychological, to get "electric advertising" contracts. And the basis of this engineering and special knowledge is—data.

The new business man needs more data.

* * * * * *

When it comes to power data, there is a deplorable lack of specific facts and figures. Papers presented before recent conventions give a certain amount of such data, motor manufacturers give a certain amount more. But this data unfortunately is either purely general, partially incomplete or biased by the manufacturer's point of view. Without doubt, figures showing average current consumptions, load factors and power requirements are all of great use and benefit, but it cannot be denied that these average figures practically never apply to specific cases and are chiefly valuable as a general guide. Again, the location and physical condition of almost any machine in any industry may cause a variation of from 10 to 50 per cent in its power requirements.

What is wanted by the power men—and this want has been expressed repeatedly by power men of experience and ability — is data in which not

only the requirements and performance of an installation are noted, but also the conditions peculiar to that installation. For example, a case is cited where a standard pump sold by a responsible manufacturer was said to require a 2-hp. motor and various statistics were given as to its performance under various working conditions. This pump was installed in one instance where it required a 10 hp. motor and this not because of any lack of engineering knowledge upon the part of the central station solicitor who laid out the installation but because of peculiarities of this particular case.

The data which seems most in demand by power solicitors of experience includes complete information as to the location of machines, shafting and motors; full description of each machine and its state of repair; condition under which machines are operated, and the current consumption from the central station records. Such data show the actual results in kilowatt hours. They give the whole story, stating coldly the advantages from the central station's and the customer's standpoints.

* * * * * *

In illuminating engineering, we also require specific data. The manufacturers of various lighting equipments are profuse in generalities, though some of them publish complete illumination data with simple rules for applying it. Still it is manufacturers' data and however greatly we may respect the manufacturer, it is only natural to suppose that he is putting his best foot foremost.

However, even that which exists is badly scattered and is very difficult to codify: also, in some cases the available data is not alone designed to present the best front of the manufacturer publishing it, but too much is published to suggest or prove the inferiority of competitive equipment. Needless to say, when the stories of two competing manufacturers are compared, the central station commercial man is at a loss to choose between their statements.

The industry needs exact data on illuminants and reflectors. It needs specific suggestions as to the best types of installations for various purposes, coupled with an unbiased statement of the whys and wherefores. The ideal data for the central station illuminating engineer would be composed of details of actual installations, including a ground plan showing wiring arrangements and outlets; description of equipments; description of surroundings, decorations, furnishings, etc.; dimensions of space illuminated and the spacing of units; theoretical performance of units as shown by the preliminary calculations made when the installation was planned, and illuminometer tests showing the actual results.

Data of this sort is practical and useable, because complete and because local conditions are considered. Any bright solicitor with 100 such examples in his data book,—especially if to each test were added photograph of the installation taken by the artificial light—would be enabled to calculate and successfully solve any ordinary problem in illumination.

* * * * * *

"Electric Advertising" is a recently coined term which means something more than electric signs or window displays. The man who pretends to be an electric advertising expert must know the inside as well as the outside of signs; must know how they are hung or erected; must know the possibilities and limitations of flasher construction and must be, above all else, an advertising man. The ordinary central station sign salesman has not this information simply because data is not readily available.

The industry needs sign data. A man should be able to figure upon the necessary structure to hold a large roof sign—should know about wind pressure and structural iron work. The Underwriters' rules regarding construction of signs, changeable letters, etc., should be reduced to practical form for his guidance. The experience of large sign users—actual experience, not hearsay—should be available.

In addition to this data, a co-operative scheme should be evolved whereby lighting companies throughout the country could unite in bringing pressure to bear upon national or locality advertisers. It is not generally known that many cities contain from two to one dozen large advertising signs erected by local industries. Think of the value to almost any electric advertising man of having the records of 25 such locality advertisers. Newspapers, breweries, bakers, candy manufacturers—all of these have entered the electric advertising field locally. Data on their expenditures, opinions and experience should be gathered and published for the benefit of all central stations.

* * * * * *

These are some of the things we need.

Without doubt the National Electric Light Association is the medium through which these needs can be met. The fact that the Solicitors' Handbook just issued fails to furnish specific data need not discourage us. The Solicitors' Handbook is apparently an expensive piece of experience; fifty-one hundred dollars is a good deal of money to invest in experience but it will serve as groundwork upon which to build.

N. E. L. A. Handbook a Disappointment

THE N. E. L. A. Electrical Solicitors' Handbook, for which the Co-operative Electrical Development Association paid $2,600.00 in prizes awarded at the Convention in Chicago last year, has just reached us. Selected material from all the prize winning papers has been compiled into a single handbook by a committee headed by Mr. Arthur Williams, of the New York Edison Co.

The volume reaches us at so late a date, that we can make only very brief comment, but we are sorry to say that our impression is distinctly unfavorable. What the industry needs and is calling for vigorously is concise, dependable, usable data applicable to small central stations as well as those in the large cities. The practical handbook which the electrical solicitor will welcome and rely upon will be a comprehensive compilation of data arranged for ready reference. The greatest fault of the N. E. L. A. Handbook lies in the absence of such handy information and the superabundance of elementary and verbose theory and advice. We fear that it is so overburdened with introductory remarks and opinion on the ethics of salesmanship, that the usefulness of those portions which are of real value to every central station salesman will be lost to sight.

SECTION I is devoted to "The Elements of Central Station Business Getting." It covers 34 pages devoted to such subjects as How to Meet Opposition and Competition, How to Approach the Prospective Customer, Business Getting System, The Relations of the Company to the Consumer, and Helpful Hints to Stimulate Enthusiasm.

A great part of this section seems to be addressed to a reader who is totally ignorant of the most elementary facts and conditions of the business. There is also an apparent tendency to belittle the dignity of opposition, as witness paragraph 18 on page 7. This comes under advice on "How to Meet Opposition and Competition," and is as follows:

"There are many warm supporters of the gas engine, but it is but a poor sort of thing now that electric motors are in the field. It requires several times the attention, wears out its parts at a lamentable rate, needs continual overhauling, and emits disagreeable odors. It daily snorts and clanks away from morning till night, using an amount of gas out of all proportion to the useful work when running at anything but full load, and should it by chance be somewhat overloaded, promptly strikes work with the airy independence of the mechanic who is employed to nurse it."

These remarks would seem very flippant and ill-advised, as any solicitor who attempts to displace the gas engine with such a class of conversation will readily discover. There is much more of this same general tenor which it is unnecessary to quote. Further along under the heading of "How to Approach the Prospective Customer," paragraphs 33 and 34 deal with the question of whether or not the solicitor should buy his customer a drink. Surely such comment is out of place in a practical handbook!

There is considerable data on the subject of System—card indexes, loose leaf forms, etc.—which is valuable and commendable. The "Helpful Hints to Stimulate Enthusiasm" are reprinted from "The Booster," and while in no wise ill-taken would appear to be absolutely out of place in a book of reference.

SECTION II is devoted to Talking Points, and contains a number of very valuable suggestions in regard to the specific advantages of electricity as applied to various classes of business. It is lost, however, in a mass of remarks and generalities ranging all the way from the nature of electricity itself to the theory of advertising. There is also much information in this section which would be of infinitely greater value to the central station commercial man, if shorn of its wordiness and listed with the other data on light, heat and power. Under the subject of comparisons between the electric motor and the gas engine, there is a great deal of valuable data; but no attempt has been made to work it into a form suitable for ready use and practical application.

SECTION III, the chapter on Illumination is at once too intricate and too simple. There are already a half-dozen text books in which the science is better treated.

In a hurried review it is quite impossible to justly critcise a work of this nature, which is undoubtedly an honest endeavor to render into practical form a very difficult subject. Still, it would seem that the author and editors of the Handbook might have done a more workmanlike job.

There are a few tables of value and a few of no practical value whatever; there are many suggestions of use and benefit to any solicitor, but these are almost lost in a maze of commonplaces. It is safe to say that excepting for perhaps a half-dozen formulae there is not actually a paragraph that might justify the title of Illuminating Engineering at the head of this section.

SECTION IV deals with the subject of Heating Engineering. It considers in a general way the various adaptations of electricity for heating, for both domestic and industrial purposes. A number of tables are pro-

vided with apparently very useful information on the subject of consumption and costs, and there is a list of suggestions provided to aid the central station representative in introducing electric heat, being the classified enumeration of its various applications.

SECTION V takes up the subject of Power Engineering. In the introduction, we find the following statement: "It is not at all necessary for the electrical solicitor to understand what goes on inside the motor, or to study the theory of operation or design." We fail to see how any such statement can be justified; moreover, the men who are most desirous of securing the power data which the handbook is expected to provide, know from experience that without accurate understanding and practical engineering ability, they are powerless to sell electric motors against steam, gas or other competition. The inconsistency of such a statement is further evidenced by the fact that on the next page are set forth the characteristics of series, shunt and compound wound motors, and on the page following further detail bearing on operating characteristics and complex equations dealing with magnetic flux, voltage across the motor leads, power loss and efficiencies, with much information on the subject of armature re-action, inherent regulation, etc. Here follows considerable data on the subject of choice of motors, followed by some 24 pages on applications of motors for machine tools.

In this section, there is a large number of tables which are unquestionably of real value to the power man, notably those taken from Mr. Lloyd's paper before the Edison Association, 1905. Very little of this material, however, is new, the greater share being reprinted from manufacturers' catalogues. Here, again, there are classified lists showing the applications of small motors for various classes of business, which are in handy shape for use.

In conclusion, it would seem that this Handbook, for which so much money has been expended and the preparation of which has called forth an amount of labor which we can little appreciate, is after all doomed to the dusty shelf. It will serve as a primer for the new solicitor who has no knowledge whatever of the central station principles or practice. To those in the field who have so long and so eagerly looked forward to its publication, the Electrical Solicitors' Handbook is a disappointment.

Twenty-Four Hour Service in a Town of 2500 People

The Story of the Methods Adopted to Increase Daylight Load in Nevada, Iowa*

By M. A. Harrison, Manager
Nevada Electric Company, Nevada, Iowa

MANY of the smaller central stations operating during dark hours only, in towns of 2000 people and upwards, feel that there is more or less demand for 24-hour service, while at the same time the operators cannot quite convince themselves that enough daylight business can be obtained to offset the expense that would be incurred by reason of the longer run. We must admit that local conditions govern the amount of business to be obtained, but the general conditions of the smaller towns of Iowa are similar, and it is my opinion that there are but few towns of 2000 and thereabouts that cannot increase their sales of current sufficiently to cover the increased cost of making the daylight run.

While it is true that most of the smaller towns have little if any manufacturing industries, most all have waterworks, printing offices, blacksmith shops, laundry, machine and repair shops, plumbing shops and grain elevators that require power. These, converted to motor drive, together with the various domestic uses of current and the increased amount of lighting that could be built up will make an aggregate increase in current sales sufficient to offset the increased expense of operation. There are also so many ways electricity can be applied in the home as well as in the shop or factory, that the central station operator who confines his efforts to the operation of his plant during dark hours only, is denying himself business that he should have and business that is easily within his reach.

Most of the daylight business can be taken on and operated with present equipment, thus avoiding additional investment, as most of the power business obtained will be of such a nature that it will not come on during the lighting load, and a laundry iron could be installed in every residence connected without overloading the meter or transformer as the ironing would seldom if ever be done at night. The fixed charges would be no greater on a plant operating twenty-four hours than on one operating twelve hours, therefore the items of fuel, labor and station supplies are all that would be increased, with the exception of depreciation of the station equipment which would be slightly increased.

We are frank to admit that we ventured into the twenty-four hour service with fear and trembling at Nevada, but the conditions were such that we felt that we must at least make the effort. While operating our plant during dark hours only our service was inadequate in so far as there was

* A paper read before the Iowa State Convention, Cedar Rapids, Iowa.

some demand for light during the daytime and cloudy days, for such as dark portions of stores, vaults, cellars, etc. Our competition consisted of the usual amount of gasolene lighting and the local gas plant, furnishing water gas. This plant was owned and operated by a company consisting of local business men, and the stockholders busied themselves boosting for gas service. The business houses that required light during daylight hours favored gas as it was available any hour of the day, and felt that the amount of night business would not justify the installation of both gas and electricity, therefore gas had the advantage, service being available at any time.

We are operating in a quiet town of twenty-five hundred, with no manufacturing industries, and situated in the midst of a rich agricultural district, and quite a number of the population consist of retired farmers, who as a rule, are not considered progressive. Our plant equipment consisted of a Corliss engine belted to a single-phase 60-cycle generator, and as single-phase equipment is not considered desirable for power service, this fact was not encouraging. We closed a contract with the city, however, after much deliberation and investigation on their part, to install motors in their waterworks' pumping station which had previously been operated with steam pumps. We first started the pumping at a shallow well, using a 10-hp. motor belted to a triplex pump, and the outfit operated very nicely. This motor served as quite an advertisement, for when we could find any one interested in power we would take them to the pumping station and show them the motor in operation.

The steam laundry which had previously been located in the central part of town, purchased a building one block from our station, and we succeeded in interesting them with electric power. They also wanted us to supply steam for the operation of their dry room and heating water. After considerable investigation we decided to furnish twenty-four hour service, and on July 11th, 1907, started day service with one 5 hp. motor connected in this laundry. We shortly afterward installed several motors in a print shop, another in an elevator, and though late in the season sold a few electric fans. We solicited electric flatiron business, and succeeded in placing nearly fifty irons inside of ninety days, several of which went in where gas ranges were in use. We had anticipated being able to place twenty or twenty-five irons, and were much pleased in being able to place the increased number.

As we had but a single unit in our station we found it impractical to keep it running constantly, twenty-four hours per day, six days per week, we therefore arranged to shut down from 6 to 7 a. m. in the summer months, and from 12 o'clock noon to 1 p. m. in the winter months. This plan has been quite satisfactory inasmuch as few if any subscribers are inconvenienced and it gives us a chance to give the machinery some attention, in this way we have been able to keep our station in good operating condition and have had no interruptions by way of shut-downs.

The first few months people were skeptical and thought we could not obtain sufficient daylight business to justify us in furnishing the service and

would eventually discontinue it, but as soon as they observed our business increasing and found that we were determined to furnish reliable service we were able to take over some of the gas and gasolene lighting, which we could never have hoped to get had we not started day service. We had expected to sustain a loss in the operation of the daylight run for the first year, but found on checking up that the amount of increase sales of current a little more than paid for the extra amount of fuel, supplies and labor, which result was very gratifying.

At present we have a 68 hp. motor load connected, consisting of waterworks, grain elevator, blacksmith shop, laundry, plumbing shop, produce and poultry house, and printing offices, also about 75 flatirons and a 20-pound tailor's goose. Perhaps one of the most novel uses for which electric power was ever applied in a commercial way, was conceived by one of our subscribers who operated a produce and poultry establishment—that of washing the feet of dressed fowls with a revolving brush attached to an extended shaft of a small motor.

The methods we adopted to increase our daylight load were similar to those adopted by some of the larger stations. There are two tri-weekly newspapers published in our town, and we ran an advertisement in each for a few weeks when we first inaugurated day service. Later, we only ran them occasionally, as we did not feel that the results obtained justified carrying an ad each issue.

One of the most efficient forms of advertising that we have used is a small ad that we run each month on our bills. We use a bill about 4 x 8 inches in size, and about one-third of it is used for advertising. The ad is changed each month, and we find that it attracts the attention of a large percentage of our patrons. As an illustration I have copied one of our recent ads, as it appeared on our bill: the title was "Various Uses of Electricity."

Electricity, in general, is applied to lighting, especially in the smaller cities; but is now being applied in Nevada, in many other ways. When you turn the faucet and draw a drink of water, did it ever occur to you that it was pumped by electricity? When your clothes go to the laundry, electricity does the work, several are using it in their homes to operate the washing machine, and for ironing it is unexcelled. It prints the local newspaper and grinds the coffee for the groceryman, it pumps air to the forge for the blacksmith and operates the tools for the workmen at the monument shop. Up-to-date physicians are using it in their treatment, the electric heating pad is so far superior to the hot water bottle that there is no comparison, and one of the latest applications is that of assisting the cobbler in repairing shoes. There are many other purposes for which it will soon be used.

We put in a stock of motors ranging from 5 hp. down, and had them on hand, ready to install immediately, as soon as a subscriber was found who wanted one. We displaced several gasolene engines by installing motors on trial beside the engines. In a few instances we had to take the engines as part payment on the motor in order

to close the deal, but succeeded in disposing of them at cost, besides being able to sell them out of town.

Our station is located at the edge of town, therefore we opened an office and salesroom at a good location in the central part of town, where we had a window display and demonstrated various electrical devices. We put flatirons out on trial, and estimate that 75 per cent of the irons put out were retained. To further encourage the use of flatirons, we give a discount of 20 per cent on all current used in excess of 8 kw. hrs. each month, where flatirons were installed. We also put washing machine motors out on trial, and showed confidence in our goods by allowing a liberal trial of them. We also allowed desk fans and sewing machine motors to be taken out on trial. We have sold all motors, flatirons and other appliances at a very low price and have charged for wiring at cost of time and material, as we feel that we should look to the sale of current for profit, rather than to the sale of supplies.

We have not been able to do as much soliciting for new business as should have been done, and feel that we could have had more load connected at this time, had more systematic soliciting and advertising been done However, through the various channels of advertising, people are learning more of the convenience of electrical appliances and are therefore more easily interested, and are more willing to give attention to demonstrations.

The washing machine motor is a convenience much appreciated in the home and we have found some customers who have wired their homes to enable them to get power to operate the washing machine, small pump or sewing machine, whereas, they would not have incurred the expense for lighting only. The portable vacuum cleaner is another convenience that we have promoted. We encouraged a man who devoted considerable time to house cleaning to purchase a portable vacuum cleaner, and allowed him free use of our show window for a few days, in which he exhibited the cleaning machine. We assisted him in assembling and starting the machine, and instructed him as to the method of making connections to the service lines.

This machine being equipped with a ½ hp. induction motor, requires more current in starting than can be safely taken through a 5 amp. meter, which is the size used on most residence service. We therefore mounted a pair of combination cut-outs on a small board with a receptacle between them, connecting them to the lines with current taps, one set ahead of meter, the other back of meter, so that current for starting is not taken through the meter, but the load is thrown over onto the meter after the motor comes up to speed. This machine is doing satisfactory work and running most of the time; and as the current consumed is registered on residence meters, it is a good revenue producer for the central station.

Before starting twenty-four hour service it would have been utterly impossible to have convinced us that as much new business could have been secured inside of two years time, and there is still more to come. We have tried to be liberal at all times with our subscribers in every way, have looked

after complaints promptly, and above all things have endeavored to maintain our service at a high standard, with the result that we are enjoying a liberal patronage and believe we have the good will of most all of our customers.

The success of a central station is quite largely measured by the methods of education adopted and carried out. The more the people become educated to the various and convenient applications of electricity the more it will be used.

A Dollar Idea

John C. McLaughlin, Chief Clerk
Potomac Electric Power Co., Washington, D. C.

A LARGE red card shaped similar to a shipping tag and printed in prominent type, hanging from a chandelier in a vacant apartment, store or dwelling is bound to attract attention and reach the renter at the proper moment. It is direct advertising which brings results at small cost.

Our tag is printed as follows:—

"The Light of the Hour."

ELECTRIC LIGHT
IT IS CLEAN
SAFE
CONVENIENT
SANITARY
THE BEST

The owners of this building have expended a large amount in providing electricity for your comfort and convenience. We want you to be one of our customers.

Use the attached post card, and our representative will call at once giving full information.

Potomac Electric Power Co.
213 Fourteenth Street, N. W.
WASHINGTON, D. C.

This apartment is completely equipped for Electric Lighting. If you rent or lease it, detach and mail us the annexed postcard, and our representative will call immediately and give full information regarding the "Light of the Hour."

Washington, D. C......
Potomac Electric Power Co.
213 Fourteenth Street, N. W.
Gentlemen:—
Kindly have meter installed / have representative call
Apartment.....
.....**Apartment House**
Most convenient time to call.....
.....
Signed.....

A "New Centre" in South Bend

How the Business Heart of the City Was Re-established Through Electric Advertising

By George W. Barlow, New Business and Advertising Manager
Indiana & Michigan Electric Co., South Bend, Ind.

IT is not uncommon for the business center of a city, under the influence of the city's growth to gradually travel from its original location toward the section of newer development. These changes, however, are usually slow and inevitable, the result of new buildings on the one side and crumbling and decay on the other, a part with the march of time and not due specifically to any foreordained plans.

In South Bend, Indiana, the business heart of the city had continued without change either of location or character to any great extent, for over thirty years. The second generation of merchants had accepted their charges with scarce a care as to the security of their business prestige and on Thursday and Saturday nights they were at their respective places of business to serve those who insisted upon buying, but on other nights the store fronts were dark and the streets more or less deserted.

About a year ago this company undertook to impress upon our local business men the necessity for a commercial awakening in South Bend through a spirited and determined campaign for raising the standard of illumination. We opened up upon flat rate window and display lighting and to facilitate

Street Illumination in the New Centre, South Bend, Indiana, Showing New Centre Sign

results we secured four wiremen who had had wide experience in New York City in the installing of store and window equipment. These men were well up on the high efficiency illumination and as representatives of our New Business Department were able to do very good work, as the merchant had but one person to deal with from the time the proposition was first brought to his attention until the completion of the work.

The campaign began last summer with an onslaught upon the small merchants away from the real business center. By October the windows of over fifty merchants were burning until 11 o'clock on our flat rate schedule at 1c. per cp. per week, and the exclusive use of tungsten lamps and Holophane reflectors made that part of town loom up tremendously. Soon the merchants of the old business center began setting their time clocks to correspond with our patrolman's time, and gradually they commenced putting in tungsten lamps and efficient reflectors until the pendulum of transient interest seemingly swung back their way again.

The "New Centre" district having had a taste of real accomplishment, looked for other methods to regain their former advantageous prominence. A live bank, new to the city, took the lead, and after a preliminary canvass by its president, ordered the New Centre sign, costing $430.00. This order was given on a Monday morning, on condition that the sign would be hung and burning by the following Saturday night, which condition was easily met by a local contracting firm. The sign raised enthusiasm to a fever heat. People coming in from Niles, Elkhart and other surrounding towns took notice and strayed from the old centre, invariably walking towards the New Centre sign. This, in spite of the fact that the interurban trolley terminal is located in the old business centre and consequently gave that section first chance at all out of town buyers.

The New Centre Association, however, again began looking about, not being content with a partial scoop. Ornamental curb line lamp-posts were suggested and the company was asked for advice. We opposed the lamp-posts, not only because they were expensive, but because we believe that too much lighting on the sidewalk destroys the contrast of the store windows, which we consider the most potent influence for getting the people down through the New Centre. After a couple of board meetings, channel iron arches were decided upon and this company agreed to furnish them complete and equipped with 40—8 cp. lamps on each arch to burn from dusk to 11 o'clock nightly at 1c. per cp. per week on the regular window lighting schedule. Nine arches were erected.

Before long rents in the new business centre soared 60% and more, and the merchants who had no leases fast gave way to more progressive firms, many from the old centre. One in particular, who already owned the largest and best

electric sign in South Bend, moved bodily from the old centre to the New Centre and located right across the street from a branch store which he already controlled. At the present moment the Old Centre Merchants' Association is hustling around signing subscriptions for fifteen arches to be erected in their section, equipped with 20 cp. low voltage tungstens, in combination with small transformers.

the pace for the contractors, who have since equipped many other stores as a result of the object lesson.

With the arches up and the banks of window lighting on either side of the street, it is the comment of salesmen that South Bend has easily the best lighted street in the state. Some other cities of course have larger signs and more scattered display, but for uniformity of window lighting and signs we feel

Old Business Centre, South Bend, Indiana, Looking Toward the New Centre

Beginning with the flat rate campaign, we soon branched out into interior lighting, and by renting tungsten lamps at 25c. per month, including Holophane reflectors, we soon had over 1200 tungstens installed, mostly in the New Centre district. This tungsten rental proposition has yielded a good profit in receipts, but vastly more by setting

that there is little to be feared from other quarters. Moreover, the activity and resultant prosperity of South Bend merchants has been very naturally effected by the increased number of people on the streets at night and by the steadily growing trade from out of town. These people are drawn by the new life, vigor and cheer of our city.

Two Cow-Power vs. Three Horse-Power

By H. A. Waite, Power Man
Easton Gas & Electric Company, Easton, Pa.

OF all the amusing things a power solicitor finds on his continual hunt for business, odd forms of power transmission and application, I believe, afford the most real humor.

Two Cow-Power

Recently one of our gas solicitors reported a power prospect in his territory, and said that the place was now operated by a tread mill. That sounded very interesting, and a call proved that one of Easton's leading butchers was actually using a team of oxen on a tread mill to drive a small meat grinder he used in the manufacture of sausage and bologna.

He was doing a good business he said, and found the oxen both expensive to keep and hard to handle; in fact, it was not a difficult task to show him that a motor would save him time and money.

Just as I thought everything was settled, however, he asked how large a motor would be required.

"Three horse-power" I replied, and saw immediately that something was up.

He turned a withering glance in my direction, and said, "Young fellow, two cow-power does it fine. Don't you reckon two horse-power would be a-plenty?"

I explained as best I could after such an argument, and today a 3 hp. motor drives the grinder much to the butcher's delight.

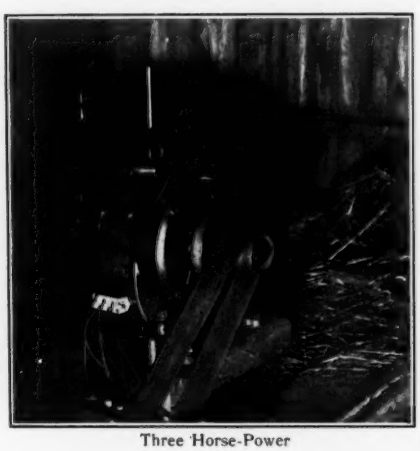
Sequel:—

The oxen were ground up by their iron successor.

Important for the Data Book:—

2 cow-power=3 horse-power.

(You will note that the motor is also far superior to the ox for photographic purposes. It does not jump at the flash light.)



Three Horse-Power

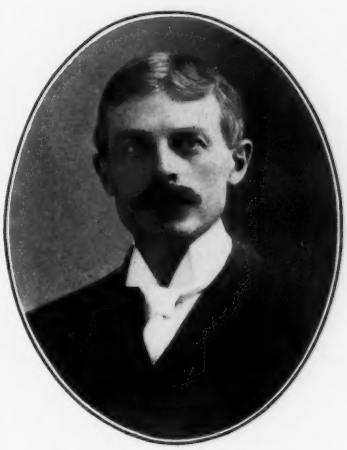
Abstracts of Papers Presented at the N. E. L. A. Convention at Atlantic City—Commercial Sessions

ADVANTAGES TO BE DERIVED FROM UNIFORM COMMERCIAL DEPARTMENT FORMS AND METHODS

CLARE N. STANNARD

THE complete control and efficient operation of a company can be adjudged by the rapidity, smoothness and freedom from friction with which the general routine plans and policies are executed. Thus, in well-organized companies we find co-operation, well-directed effort, and pleasant relations existing between the public and the company.

Progression is measured by the rapidity with which we recognize and adapt to our uses the experiences of others, and at the same time add our mite to the knowledge of the general fund.



Clare N. Stannard, Secretary
Denver Gas & Electric Co., Denver, Colo.

The importance of the commercial department in cultivating a field of goodwill on the part of our customers, can not be denied, although until recent years this responsibility has not been given the proper weight.

It is desirable for those who have the experience and material at hand to test for the benefit of all, as well as for themselves, a given plan to introduce their ideas, and gradually build up in their organization a system of uniformity in policy.

In order to obtain this end each detail of management must be prearranged, each unit in the system must be complete in itself, and an important member in the final structure.

Due to local conditions, it may perhaps be almost impossible for all forms to be absolutely uniform, but there is no question that a general uniformity would be most helpful.

Insurance companies, the medical profession and railway associations have adopted uniform forms and contracts. They all find that this system works out greatly to their advantage, decreasing costs, and we feel that the forms of a central station company should be worked out on similar lines, and in that way accomplish great results.

The ideal comparative report would be obtained, were we able to tabulate our data so as to have it reflect local conditions; comparisons being made not only between companies, but also reflecting the personal efforts of the individual salesman.

The general results of a company may be excellent without comparisons, and may hide the inefficiency of one department, or individual, unless the unit is kept in mind, and a means taken to present this detail as a part of the whole scheme.

One syndicate is reported to ex-

change daily statements between the sales departments of the various underlying companies; a plan which, if conditions be understood, adds materially to the effectiveness of each company, and promotes rivalry, which otherwise would not be maintained.

Reference to the Proceedings of the National Electric Light Association would show that there is great difference in the amounts of allowance of different companies for soliciting expenses and for advertising; and in any one company there is a great difference in the amount of new business that may be secured by different solicitors. If a uniform set of forms for the commercial department were prepared and adopted by any large number of member companies, comparative results would be readily available from year to year, and any one company could readily determine whether or not the department was effectively organized.

Inasmuch as the development of this business is largely given to education, it seems there should be a uniform method of developing it by means of education.

There is no question but that at the present time this work is largely done by the representatives, and if some plan could be worked out whereby the desire for service would be created in some attractive manner, great results would be accomplished. There are many schemes that could be worked out, which would be equally applicable in all parts of the country; and if, for illustration, the National Electric Light Association were to establish a publicity bureau for the purpose of directing the efforts of its members, keeping in touch with what is done by the companies, and work up the best means of education, we believe great good could be accomplished.

Concentration of effort upon a given scheme of lighting brings confidence and enthusiasm to the salesman and gives it an advertising value, and becomes a talking point with the consumer.

There are so many beautiful signs now to be purchased that it is indeed almost impossible for the up-to-date merchant to withstand the temptation of indulging in this most important branch of advertising, which need not be necessarily expensive. Are there not uniform ways of going after this class of business?

As an illustration, one prominent publication (SELLING ELECTRICITY) recently inaugurated a bank sign campaign, and there are surely many similar schemes that might be worked out to advantage.

The electric power branch of the business requires constant and persistent work. The salesman's efforts could be reinforced by a vigorous advertising campaign. A system of uniform advertising, personally followed up, would, we believe, be of the greatest assistance to the power salesman; therefore the ideal uniform system would prove to be most successful when applied to this branch of the business.

We believe the monthly Bulletin of the National Electric Light Association could be used very effectively in publishing advertisements of various companies, so that the best class of newspaper advertising done by them could be distributed, and thus all get the benefit. We think this plan is feasible, if each member company would forward to the office of the Bulletin copies of all their newspaper advertising, and let the officers use their judgment in publishing the best. All the member companies would in this way get copies of the best advertising matter. The same is true of personal letters, and should result in great good to the fraternity. If the Association furnished copy on electric lighting to magazines, the Associated Press, and the like, they would be very glad to reecive this matter. It would be in the nature of education in the

highest way, and would be of great benefit to the business. This should also be carried out along the lines of the best method of utilizing electric lighting in the homes and in the place of business.

A board of National Electric Light Association commercial engineers would be beneficial to all central station companies. Realizing that many individual companies could not afford a similar board, we would suggest that the board be sustained by the Association, for we are sure that the services of such a board would result advantageously to all.

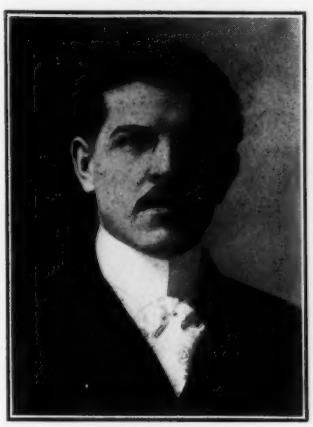
There is no doubt that the important purposes of uniformity in ideas, methods and records are to the advantage of the salesman, the office force, and, in fact, every one connected with the company, and that careful accuracy and completeness are the essential requisites of commercial work.

THE ADVANTAGE OF GROUP OR INDIVIDUAL DRIVE IN CERTAIN INSTALLATIONS

C. A. Graves

PROBABLY every power user who has been approached by central station representatives or motor salesmen has often heard the phrase, "You can reduce your bills by installing individual motor drive."

Each installation is a separate problem in which are the following factors; the degree in which these different factors predominate determines the type of drive: Installation cost, price of current, machine load factor, shafting friction, motor efficiency, maintenance, speed variation or uniformity; time to make change, floor space, character of work.



C. A. Graves
Edison Electric Illuminating Company
Brooklyn, N. Y.

Cost of installation is the principal factor that prevents the installation of the individual motor drive.

The cost of group-drive installations, including the motor, shafting, and belting, varies from $20 to $60 per horse-power of motor; the latter figures for small size motors.

The individual drive, where motors are installed on the floor or ceiling and belted to the machines, costs from $40 to $60 per motor-horse-power.

Where the motors are fastened to the machine by bolts or brackets, and gears or silent chains used, the cost is approximately $80 per motor-horse-power for small motors.

The amount of money to be spent for an individual-drive installation to obtain the greatest economy depends upon the price of the current, the average number of hours per day the different machines are in operation, and the friction of the shafting.

While the individual motor installation increases the horse-power connected over a group-drive installation, it does not change the maximum demand materially. Individual drive has a disadvantage, however, with those contracts in which the discount al-

lowed is based on the connected motor load or the maximum demand is figured on a percentage of the connected load; also if the minimum monthly guarantee is based on the connected horse-power. The decreased current consumption of the individual-drive plant will not earn as low an average rate as the same plant having group drive, according to a great many power contracts; and the lower the rate, the less advantageous is the individual motor drive, as the fixed charges are a large part of the cost.

The average plant manager has a wrong idea regarding the length of time his various machines are in operation, and to illustrate the case, the results of a test on the principal machines in a wagon and truck manufacturing plant are given in Table I. These figures are the average of a 5-days' test and check very closely with the monthly meter readings.

TABLE I

KILOWATT-HOURS PER DAY USED BY INDIVIDUAL MACHINES
AVERAGE DAY'S RUN, 9.5 HOURS = 570 MINUTES

	Per Cent of Time in Days Machine is Run	Number of Starts per Day	Minutes Average Run	* Min. Kw. Load	* Max. Kw. Load	* Kw. Hours per Day
Jointer	1/5	60	2.0	1.6	2.5	4.0
Cut-off saw	1/40	22	0.6	2.0	4.6	0.7
Rip saw	1/7	34	2.2	2.0	8.0	5.2
Planer, 36-inch	1/5	22	4.6	5.0	15.0	13.4
Boring machine	1/2	12	20.0	0.8	2.0	5.2
Band saw	1/4	56	2.4	1.1	2.3	3.6
Shaper	1/5	16	6.4	2.2	3.5	5.0
Bradley hammer	1/9	18	3.3	1.0	5.0	3.5
Mortising machine	1/60	6	1.4	3.4	6.0	1.0
Tanging machine	1/55	2	5.5	0.8	2.0	0.4
Rounder	1/20	8	3.0	2.3	3.3	1.0
24-inch emery wheel	1/9	8	5.0	0.7	3.0	2.0
Elevator (5-ton)	1/5	36	2.0	0.0	12.0	5.0
2 drill presses	All day	..	570.0	...	...	8.0
Blower	"	..	570.0	1.8	2.0	18.0
Shafting	"	..	570.0	...	1.4	13.3
		300				89.3
						26 days

* Includes current required to run motors.
89.3 kilowatt hours × 26 days = 2321 kilowatt-hours.
Meter readings for average month = 2300 kilowatt-hours.

The term "load factor" as used refers to the average number of hours the machines run per day, 10 hours being considered 100 per cent.

It is expensive to have machines used but a short time daily, and managers are continually trying to keep them busy, but even in the best-managed plant or with automatic machines, in textile mills and similar service the machines are not in operation over 85 per cent of the time.

In determining the load factor of an individual group of machines a record of the daily or monthly output compared with the maximum output will be helpful.

The usual method of denoting the power necessary to drive shafting has been in a percentage of the total power used, or in horse-power per hundred-foot length. In order to determine more definitely the power absorbed by shafting, the motor testers in Brooklyn were instructed, in addition to the usual data, to count the hangers in which the shaft revolved and also the loose pulleys on the shafting and countershafting over which belts were passing. It was found that the average loose pulley with belt absorbed as much power as a hanger, so the term "bearing" as used in the paper includes both hangers and loose pulleys.

In small shops each operator is expected to take care of the machine on which he works, and as a result some are kept well oiled and others are looked after indifferently. If a belt needs attention, the one operating the machine must attend to it. In case individual direct-current motors are to be considered, this item of maintenance becomes a large one, as it would be necessary in some instances to employ an additional man to spend part of his time on the motor equipment, while with the group drive the one or two larger motors would be taken care of by the foreman. In larger plants, a man is usually employed for the specific purpose of caring for the shafting and belts, and this man can be trained to take care of the motor equipment.

The individual motor drive increases the output on machine tools over the cone pulleys or complicated mechanical speed-changing devices, and where speed variation is wanted no other drive should be recommended.

If strictly uniform speed is required on a group of machines, the motor may be connected to each machine by a chain drive or to a lay shaft and the machines driven from that by means of a chain or gear.

This is an important factor in favor of the group drive, as shop managers believe they can not spare the machines long enough to have the motors attached, the usual desire being to have the electric power introduced as soon as possible; one of the talking points of the salesman being the ability to install a motor direct to the existing shaft without loss of time.

If floor space is an important factor, individual motor drive will allow the arrangement of machines at any angle and thus allow more machines of certain types on the same space. Another advantage is that it separates the machine operators. A further advantage is in so arranging the machines that the light from the windows falls on the work at the proper angle.

With large machine tools nothing but individual drive should be selected; and in plants having traveling cranes that move the material to the machine or the machine to the material, also in shops where cleanliness and light is important.

Group drive is preferable in considering machines that run together or machines located close together, through which materials pass in sequence.

On direct-current systems group drive should be used where there are inflammable materials or vapors, and in very dusty places the motor should be installed in an adjoining room and a shaft extended through the partition to the various machines.

One of the talking points of an enclosed motor is thus spoiled, but a motor needs some attention, and if it is dusty and dirty it is not apt to be cared for until something happens. On the other hand, individual motor drive does away with belt holes through the floors.

Each installation should be weighed individually, because the costs and the relative value of the chief factors vary in different sections of the country and with different requirements of the client.

Considering the economical operation only, the group-drive installation recommends itself when the shafting friction is low, the rate for current low and the machine load factor high.

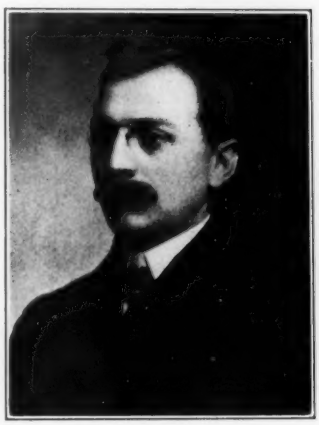
The individual motor shows the largest saving with a high rate for current, a high shafting friction and a low machine load factor. It also shows an increased output when used within its field.

(Mr. Graves in closing submits a series of charts showing comparative data on installations of group and individual drive for sewing machines, machine shops, wood-working, stone yards, small factories and printing presses.)

ELECTRIC POWER

HENRY J. GILLE

IF it were possible to sell our product so as to keep our generating and distributing systems loaded continuously, we should have reached the ideal condition we are all striving to attain. It is probably safe to assume that station load factors range generally between 25 and 35 per cent, there being exceptions both above and below. It is therefore apparent that if we had 100-per cent load factor, with the present output we could dispense with between 65 and 75 per cent of the total capacity investment. We are therefore carrying this investment, which, on a basis of 100-per cent load factor, is idle, and on a basis of our present load factor our entire investment is idle between 65 and 75 per cent of the total time. It is evident, therefore, that we have a large capacity available during certain hours of the day, and if it were possible to develop business during this period it would not only reduce the cost per unit of output of our total business, but would greatly increase the earning capacity of our investment.



H. J. Gille

With new avenues of electrical development constantly being opened up, new problems of the sale of our product as well as the manufacture and distribution present themselves. In the past electric current has been divided into two classes—light and power. Whereas this division seemed at first to be arbitrary, it was soon realized that there was not only a good reason for this division but a basis therefor. One of the earliest arguments presented was that in order to make the electric business a paying one it was necessary to develop a day power load. It was found that in same instances part of it was on at the same time. A large proportion, however, went off at the time the lighting load came on. It was also found that considerable power business developed with intermittent load to such an extent that it had a considerable influence on the total load of the station. In other words, the station demand was smaller in proportion to the total individual demands than was that of commercial lighting, which constituted the central station business at that time. Power load, therefore, established a ratio of cost to serve, different from that of lighting, and as the power business developed this difference apparently increased to a certain point, and the usual condition today of a central station load is that a part of the power load overlaps the lighting load. I have no data and do not know that there are any in existence that give the diversity factor for power and light—together or separate—supplied by a central station, covering the period of years during which the largest development took place—which would be interesting and would throw considerable light on this question.

It is difficult to get reliable information for power and light loads separate, for the reason that both in

an average city are furnished from the same system, and in order to show the effect on the peak we have prepared a number of individual load curves of representative classes of business in several cities. These consumers' load curves appear on the same sheet with the station load curves, besides some data that are valuable in considering each class. (Curves follow showing demand and time of peak on 16 classes of power installation.)

These curves indicate in a general way the class of business that makes up the power peak. We feel that considerable improvement could be made by studying the power conditions of the individual consumers, for the reason that it is possible in many cases to operate heavy machinery, which is operated for a short time only each day, in the forenoon or early afternoon without inconveniencing the consumer. Every horse-power that is kept off the peak in that way reduces the station capacity required.

Another suggestion is to get power users to reduce the noon shut-down from 1 hour to 30 minutes, and to shut down one-half hour earlier in the evening. This has been done in a great many cases at the solicitation of the help. If this could be carried out to any considerable extent it would have a material effect on the station peak. This, however, would affect only those stations that have a light and power peak. Some cities, as I have already pointed out, have only a power peak; however, we think that such are the exceptions.

The net earnings of a company are very largely affected by the class of business we push, and how we take care of it after we get it; besides, it determines our costs and ability to furnish service at the lowest cost, and it is evident—as we have already pointed out—that our capacity is idle from 65 to 75 per cent of the time. We can therefore supply service off the peak without increasing our investment costs; there is no question but what the greatest possible opportunity for increasing the earning capacity of central stations is by increasing the load factor, or in other words, obtaining load off the peak.

(Mr. Gille here submits data on the use of electricity in the manufacture of nitrates or other products using large amounts of power off the peak and continues:)

It is possible that in some cases power would not be entirely shut off during the peak. If from 40 to 60 per cent of the total power could be supplied during this time, the field of possible operations would be greatly broadened, because, in some of the processes excluded by their nature from consideration here, a reduction of the current is not attended with the serious consequences that accompany a complete shut-down. Such processes include the manufacture of chlorine and soda, aluminum sodium, carbon bi-sulphate, chlorate of potash, and various other compounds of lesser importance.

The conclusion, which is reached by consideration of this subject, is that if power companies can supply power off the peak for 20 hours or more per day, at prices below $10 per kilowatt-year, they should be able to interest the electrochemists.

We feel that the matter of developing business off the peak is of the greatest interest to us all, as we have millions of dollars invested which are lying idle the largest portion of the time. If this investment could be utilized to produce a revenue during the period when it is idle, it would materially change central station operation, and we feel that this Association should not only keep in touch with the progress made in these industries, but should do every thing possible to assist in their development; and, if it is proper, we suggest the appointing of a committee with sufficient funds at its disposal to make a thorough investigation.

INTENSIVE METHODS OF BUSINESS DEVELOPMENT

JOHN C. PARKER

IN the earlier days Rochester had suffered much from unwholesome competition between rival companies. The town had lent itself peculiarly to an aggravated form of competition, owing to the numerous milling properties which, with the advent of the electric art, had been converted into hydro-electric stations. These companies, in the wild competition to secure all the business in sight, had endeavored to get business from one another by making competitive rates, so that the purchasing public had readily perceived that the use of the club was likely to secure peculiarly advantageous contracts. Unfortunately, many of these were long-term contracts, and some few of them still remain in force.

In the nature of things, the abolition of these special contracts resulted in an increase of rates to not a few of the formerly highly-favored customers. Moreover, owing to the prevalence of small industries in Rochester, the business field was very early saturated, most of the readily obtainable business being secured. How well this has been done is evidenced by the fact that, although Rochester is not a large city, it has a larger kilowatt output than any city in the state outside of Greater New York.

The period of what agriculturists call extensive cultivation having been passed, it was decided that an intensive cultivation of the field was the only means for producing the best returns to the company and the most benefit to the community. Therefore, in conjunction with our commercial department, there was organized a branch of the engineering department to take care of industrial propositions. At the present time the tail bids fair to wag the dog, as this industrial work has come to be by far the larger part of the work of our engineering department.

Starting something like two years ago with but one man employed on this work, we now have, in addition to the speaker, seven thoroughly-trained engineers employed in this one class of work.

The company has felt that a broader view of the mechanical phase of the question should be adopted. We have recognized that the price of electrical energy, as of any other commodity, is a compromise between the cost of production on the one hand and the value of the utility on the other. In consequence of this, we have been not at all satisfied to sell electrical power for generating heat by friction in bearings, shafting and belting, or for use in wasteful industrial processes. This means, then, that the customer's processes of manufacturing must be carefully studied, his equipment made familiar to the industrial engineer and a thorough renovation undertaken wherever at all feasible. In many cases a customer is skeptical as to the company's judgment or possibly a little dubious about a so unique business attitude. In such cases we have put in the recommended equipment "on approval"; that is, an installation has been made free of expense to the consumer, to be paid for at the end of a fair test period if it has proven satisfactory. In no such cases have the results been other than what we would wish. It has, of course, in many cases been quite difficult to persuade customers to put in the equipment that was for their own best interests; but patience, following systematic study, generally accomplishes this desirable result, and often the sequel proves the wisdom of such

a course in the intangible but very actual return of goodwill and unsolicited commendation.

The problems that we encounter naturally involve a great deal in the way of studying boiler efficiency and the efficiency of steam-driven apparatus in already existing plants, existing mechanical drives, and the like. It is for this reason that we have thrown considerable emphasis on the mechanical features of our work. We often have to select between various types of geared and belted drive and to undertake special designs for the gearing. In some cases we have found it necessary to build motors into existing machines as integral parts of the unit. All of this work is expensive when undertaken on so full a scale as that which we have adopted, and our present experience has been too brief to enable us to show in segregated form the value of such service.

That the management has been well assured that the goodwill attained, as well as the income, justified the experiment is testified by the fact that through the period of industrial depression additions have constantly been made to our force as required. Today we are handling something over eighty different propositions, some of them very large and complex involving a tremendous amount of detail.

One feature that we have attempted to emphasize in such work has been the decentralization of our department so far as outside relations are concerned; that is, all members have been encouraged to undertake correspondence over their own signatures and to appear personally before their prospects or customers. The result is that the customer cultivates the habit of thinking of one certain man in connection with his work and of dealing with this man and looking to him for assistance on all sorts of problems.

We believe that this feature is one of the utmost importance in any organization where much outside work is done, and that it should extend throughout such a company. Care, of course, must be exercised, in executing such a policy, that the work does not become loose as well as decentralized. The utmost freedom of consultation with the head of the department should be invited, consultation between various members of the staff should be encouraged, and each man in the staff should know, at least in a superficial way, what the other men are doing.

Previous reference has been made to the cost of production of power. In this connection, the writer wishes to make a suggestion for the consideration of the Association. It is manifestly expensive for each individual to collect data of the kind needed to meet competitive prices, and the value of such data can be materially enhanced if a full interchange among the various member companies is promoted. In this work our company stands willing to bear its full share by placing at the disposal of other member companies complete records of all tests that we are able to make on isolated plants and all data that we are able to collect concerning the cost of operation of isolated plants. We feel that other companies will be very willing to co-operate in this work if a proper channel is afforded, and believe that a committee of the Association should be formed to collect such information and to disseminate it. In the collection of information of this kind it is very important that all the details should be given so that the records will have not a local, but a general, value. The limitations under which the tests are made or the data collected should be explicitly stated, the unit costs ascertained wherever possible, and the general condition of the plants noted. Then, any member company using data collected at a different place can make corrections to correspond to local prices, and an immense amount of such material will thus become available. We believe

that the need for this is one of the most urgent existing at the present time. This is especially the case in the matter of getting reliable, dependable data in connection with gas and gasolene plants, and that this condition is not peculiar to our own locality we recognize by the mass of correspondence that we continuously receive from other companies, to which we are glad to reply as fully as our, at best, meagre information permits.

COMPILATION OF LOAD FACTORS

E. W. Lloyd

WITH the rapid adoption of differential rates by central station companies, based on consumers' load factors, it is absolutely necessary that the commercial man have some practical data on the load factor of different industries before he can arrive not only at the rate per kilowatt-hour which the consumer will earn, but at the quantity of electricity he will consume.

It is not many years since most manufacturers thought the actual connected motor or lamp load was the real maximum load on his plant, but we know to-day that this is not true in a great majority of cases, and that the true maximum rarely exceeds 75 per cent of the connected load.

A maximum measuring instrument to be used on alternating-current circuits not being available, the Commonwealth Edison Company, of Chicago, serving a territory with alternating-current circuits in which there were thousands of manufacturers, found it necessary to establish a schedule of maximum percentage, based on the average maximum of several thousand customers who had been using direct current for years. The following table is one that has been adopted for alternating-current power business exclusively:

Installations under 10 hp. where only one motor is used.....	85 per cent of connected motor load
Installations under 10 hp. where more than one motor is used....	75 per cent of connected motor load
Installations from 10 hp. to 50 hp. both inclusive, irrespective of the number of motors.....	65 per cent of connected motor load
Installations over 50 hp. irrespective of the number of motors used	55 per cent of connected motor load

The above table does not apply to customers having lighting service as well as power. It is probably at least 10 per cent low should lighting be connected with the power.

While the above table may seem low to some for installations above 50 horse-power, we find from actual experience that it is often too high and that we are obliged to install instruments to register the proper maximum. Of course, where a large proportion of the installation consists of blowers or ice machines, or other machinery in this class, the percentages may be low, but generally speaking they are not.

It may be interesting to know that we have found that out of 3900 consumers of power, having installations aggregating 35,000 horse-power, the average maximum was 53.5 per cent of the connected motor load and that this was subdivided as follows:

Maximum

Installations of 1 5-hp. .....2900 customers, 75.4 per cent of connected motor load
Installations of 6 10-hp. ..... 456 customers, 64.5 per cent of connected motor load
Installations of 11 20-hp. ..... 237 customers, 64.7 per cent of connected motor load
Installations over 20-hp. ..... 307 customers, 42.9 per cent of connected motor load

A further subdivision of part of the above customers may be of value to some:

Total Installation in HP.	Number of Customers	Total HP. Connected	Average Maximum HP.	Ratio Max. to Conn. HP.
1 MOTOR				
1 to 5	1177	2165	1862	86.1
6 to 10	124	1036	676	65.3
11 to 20	32	492	303	61.6
Above 20	17	686	366	53.2
Total	1350	4379	3207	73.3
2 MOTORS				
1 to 5	177	412	285	69.1
6 to 10	51	387	261	67.4
11 to 20	30	438	288	65.9
Above 20	6	203	74	36.5
Total	264	1440	908	63.0
3 TO 5 MOTORS				
1 to 5	150	381	314	82.5
6 to 10	42	290	238	82.1
11 to 20	33	475	329	69.3
Above 20	14	1245	657	52.7
Total	239	2391	1538	64.3
6 TO 10 MOTORS				
1 to 5	42	121	80	66.0
6 to 10	21	157	98	62.4
11 to 20	10	155	98	63.1
Above 20	19	931	417	44.7
Total	92	1364	693	50.8

An analysis of the load factors of over 50,000 consumers of electric light in many different classes should be interesting. The figures are taken from actual reading of watt and maximum meters, and are as follows:

LOAD FACTORS OF SMALL AND MEDIUM LIGHTING CUSTOMERS

Kind of Business	Number of Customers	50-Watt Equivalent	Monthly Kwh.	Total Kw. Max.	Load Factor	Ratio of Max. to Connected Load
Amusements	245	32,592	100,265	904	15.2	56.3
Banks	100	9,102	35,334	304	16.1	66.8
Barns	542	7,068	17,872	242	10.2	68.5
Baths	17	380	1,086	12	11.8	66.0
Contractors	53	3,327	16,489	99	22.9	59.8
Breweries	36	3,314	7,085	74	13.2	44.8
Building owners	147	8,324	39,120	209	26.5	50.3
Buildings (public)	18	3,152	6,750	53	17.6	33.6
Churches	15	3,301	8,274	92	12.4	56.0
Clubs	65	12,071	16,988	244	9.6	28.8
Commission houses	238	4,996	20,164	172	16.2	68.9
Express Co.'s (small)	89	4,073	14,250	90	21.9	44.3
Flats	24,177	328,939	443,530	8,927	6.9	54.1
Foundries and rolling mills	104	6,679	10,939	184	8.2	55.1
Halls, apartment buildings	2,473	9,915	62,863	616	14.2	90.0

Kind of Business	Number of Customers	50-Watt Equivalent	Monthly Kwh.	Total Kw. Max.	Load Factor	Ratio of Max. to Connected Load
Halls (public)	193	14,136	24,317	486	6.9	68.6
Hotels	103	9,072	22,443	127	24.4	28.0
Houses	5,151	189,616	229,753	4,076	7.8	43.0
Loan firms	35	1,033	3,113	32	13.3	62.8
Monuments	4	323	1,215	100	16.4	63.5
Offices (business)	3,704	77,230	163,657	2,482	9.2	64.2
Offices (professional)	1,563	25,529	39,736	817	6.7	64.0
Photographers	159	4,393	6,483	170	5.3	77.6
Pool and billiards	97	2,711	11,007	87	17.4	64.5
Printers and engravers	381	14,680	45,872	433	14.7	59.0
Publishers	94	5,110	9,104	155	8.1	60.8
Railroad business	105	8,510	41,504	320	17.9	75.0
Restaurants	550	20,846	92,308	547	23.4	52.3
Saloons	2,060	50,002	234,711	157	20.8	62.6
Shops (bakery)	251	3,746	12,684	133	13.1	71.3
Shops (barber)	443	4,883	14,214	172	11.5	70.4
Shops (bicycle and electrical)	62	761	1,309	23	7.7	61.9
Shops (blacksmith)	109	1,840	2,190	611	5.0	66.5
Schools	78	5,515	7,639	148	7.2	52.9
Shops (carpenter)	58	970	1,135	27	5.8	55.5
Second-hand dealers	47	1,646	2,866	36	11.0	44.0
Shops (machine)	125	5,715	6,654	106	8.7	37.2
Shops (paint)	107	4,222	8,739	105	12.1	49.8
Shops (tailor)	552	16,796	30,462	498	8.4	59.3
Social settlements	21	3,037	6,140	79	10.7	52.5
Stables (livery)	103	2,612	10,862	68	22.2	52.3
Stores (art)	91	2,203	5,497	75	10.2	68.5
Stores (book and stationery)	80	2,615	7,052	87	11.7	66.4
Stores (cigar)	226	5,562	21,924	180	16.8	64.7
Stores (small)	49	3,069	6,293	127	6.8	83.1
Stores (dry goods)	367	11,835	26,774	453	8.2	76.5
Stores (drug)	833	17,018	92,809	671	19.3	78.8
Florists	129	3,295	12,205	1,184	10.1	71.8
Stores (furniture)	225	18,741	28,105	654	6.0	69.7
Stores (gentlemen's furnishing)	157	5,270	15,322	183	11.6	69.3
Stores (grocery)	434	6,576	17,985	240	10.3	73.0
Stores (hardware)	159	7,925	12,182	158	10.6	40.0
Stores (hat)	41	1,662	5,371	54	14.5	65.0
Stores (house furnishings)	8	279	409	7	7.8	52.0
Stores (jewelry)	316	8,813	30,424	283	15.0	64.1
Stores (millinery and dressmaking)	280	9,082	31,703	348	12.7	69.7
Stores (music)	41	1,677	3,664	40	12.4	48.8
Stores (piano)	33	4,260	10,241	108	13.0	51.1
Stores (shoe)	307	6,499	15,172	216	9.8	66.5
Stores (cleaners and dyers)	133	3,373	5,400	94	8.0	56.3
Stores (clothing)	204	14,293	22,096	378	6.6	52.9
Stores (confectionery)	322	6,422	17,193	197	12.5	61.5
Stores (coffee)	127	2,115	5,169	78	9.1	74.5
Supply houses	372	18,815	49,668	556	12.4	58.8
Shops (plumbing)	39	734	1,090	16	8.9	46.0
Small hotels and rooming houses	66	2,022	12,817	684	26.0	67.4
Stores (bird)	2	89	477	3	19.0	78.8
Stores (crockery)	19	1,170	1,590	30	7.2	52.4
Shops (harness)	5	54	98	2	7.5	67.8
Laundries	42	651	1,647	22	10.3	67.5
Meat markets	325	5,089	12,346	187	9.1	73.5
Undertakers	103	2,381	4,618	69	9.3	57.9
Telephone companies	15	363	2,592	12	29.0	67.0
Theatres	18	8,264	24,994	200	17.2	49.0
Tunnel companies	6	584	2,284	12	27.0	40.5
Warehouses	109	6,686	12,020	138	12.0	41.4
Wholesale houses	201	17,113	55,740	401	19.4	46.6
Wines and liquors	45	1,919	7,214	63	16.0	65.5
Manufacturer	1,061	52,129	94,842	1,397	9.5	53.5

Kind of Business	Number of Customers	50-Watt Equivalent	Monthly Kwh.	Total Kw. Max.	Load Factor	Ratio of Max. to Connected Load
Auto. and garages	204	7,596	20,524	228	12.4	60.5
Wrecking companies	2	139	917	5	21.2	76.8
Hospitals	34	3,290	6,248	69	12.5	42.3
Milk depots	52	1,192	4,050	37	14.9	63.0
Hay, grain, feed and coal	112	2,081	3,888	81	6.7	77.6

The above percentages are not based on momentary peaks, but on peaks as registered by Wright demand meters.

We have succeeded in collecting a large amount of information relative to load factors of different kinds of manufacturing business. These load factors were taken on plants that operated normally during a 54-hour week. Such businesses as department stores, refrigerating plants and hotels continue longer hours, and the load factors are based on their actual running conditions. The load factors for any business that normally runs only an approximate 54-hour week would not apply should any industry in this class run two shifts of men or run a night shift occasionally. Any increase in the hours' use of the current in this way would tend to better their load factor.

The figures include both power and light, and are on the larger class of customers, and in the majority of cases mentioned the power predominates to a large extent, the light having a comparatively small effect on the load factor. These figures are based on the yearly load factor. Some months the load factors are better than in others, but the figures given are an average.

Kind of Business	Load Factor 8760-Hour Year Per Cent	Ratio of Actual Max. to Connected Load Per Cent	Hours Use per day of Max. 365-Day Year
Butter and creamery	20	60	4.8
Breweries	45	60	10.8
Brass and iron beds	20	60	4.8
Biscuit manufacturers	35	55	8.4
Boots and shoes	25	65	6.0
Brass manufacturing	28	50	6.7
Boiler shops	18	45	4.3
Can manufacturers	30	70	7.2
Candy manufacturers	18	45	4.3
Clothing manufacturing	15	55	3.6
Clubs (large)	40	85	9.6
Department stores (large)	30	55	7.2
Electrical manufacturing	25	55	5.5
Express companies	40	60	9.6
Electro-plating	25	75	6.0
Engraving and printing	19	60	4.6
Fertilizer manufacturing	75	40	18.0
Furniture manufacturing	28	65	6.7
Foundries	15	75	3.6
Forge shops	30	49	7.2
Grain elevators	10	75	2.4
Glove manufacturing	25	55	6.0
Grocers (wholesale)	20	55	4.8
Hotels (small)	35	50	8.4
Hotels (large)	50	40	12.0
Ice-cream manufacturing (large)	45	75	10.8
Jewelry manufacturing	18	50	4.3
Laundries	25	70	6.0
Machine shops	26	55	6.2
Newspapers	20	75	4.8
Packing houses	30	75	7.2
Paint, lead and ink manufacturers	23	45	5.5

Kind of Business	Load Factor 8760-Hour Year Per Cent	Ratio of Actual Max. to Connected Load Per Cent	Hour Use per day of Max. 365-Day Year
Paper-box manufacturers	25	50	6.0
Plumbing and pipe fitting	26	55	6.2
Post offices	50	30	12.0
Power buildings	27	40	6.5
Refrigeration	50	90	12.0
Railroad depots	50	50	12.0
Pneumatic tube	50	90	12.0
Soap manufacturers	25	60	6.0
Seed cleaners	25	55	6.0
Screw manufacturers	30	75	7.2
Spice mills	20	55	4.8
Saw manufacturers	30	55	7.2
Structural steel	22	40	5.3
Sheet-metal manufacturers	18	70	4.3
Stone cutters	17	55	4.2
Twine Mills	30	60	7.2
Theatres	16	60	3.8
Large restaurants	50	60	12.0
Small restaurants	30	70	7.2
Woolen mills	27	80	6.5
Woodworking	28	65	6.7
Textile mills	20	65	4.8

The load factors in this table may vary somewhat in different parts of the country, due to the difference in the time of sunset. This, however, would not seriously affect the load factor of the power end of the business, but would apply largely to the lighting.

I should like to point out the great value of the collecting of load factors on different industries by the different companies belonging to the Association. It would help the commercial department of the different companies immeasurably if such information were available.

CAN A DISPLAY ROOM BE CONDUCTED UPON A PROFITABLE BASIS?

Frank B. Rae, Jr.

THIS paper, as its title suggests, is open to question. It is presented, not with a view to laying down any law of universal application, or to presenting any proven facts, but to raise an important question and offer a few suggestions as to how this question should be considered.

Let us first summarize the arguments for and against the Sales Room,—and by the term Sales Room, we mean a Display Room conducted for immediate profit, for if we consider the Display Room simply as a Display Room it is altogether unimportant whether or not it is conducted upon a paying basis: if, however, we consider it as a Sales Room, then it must be made to pay or our purpose is defeated.

The arguments in favor of the Sales Room are:—

1. It pays.

2. It encourages electrical contractors, supply dealers and various

merchants to stock, advertise and further the sale of current-consuming appliances.

3. It educates the public to a just appreciation of the money value of such appliances.

4. It makes easy and convenient the purchase by the public of appliances and supplies.

5. It educates the public to look upon these appliances and appurtenances as staple household, office and store furnishings, comparable to light hardware and kitchen utensils.

The arguments on the negative side are:—

1. The cheaper the appliances, the more the public will buy.

2. We can afford to give away, sell at a reduction or sell at cost any device which will consume a reasonable amount of current.

3. The central station is in business to manufacture and sell current and should not go into retail merchandizing.

In considering these arguments for and against, we must remember that while it is a merchandizing problem, central station men are not merchants; that while we sit in offices and solemnly aver that the public will or will not buy appliances, we really know mighty little about it. In short, most lighting companies have adopted appliance policies based wholly upon theory instead of going to school to the general merchant across the street and getting at easily accessible facts.

For example; how about the free or cut-priced appliance? A few years ago, clothiers were wont to give free a pair of suspenders with every suit of ready-made clothes: the boy who bought a velocipede was handed a full kit of tools; a buttoner or extra laces were slipped in with each pair of shoes and barbers advertised "bay rum free." Today this "something for nothing" policy is a dead letter except among the shoddy storekeepers. People look with suspicion upon "marked down" goods unless they happen to be expert buyers of that particular kind of merchandize. The better class (of which our customers are comprised) absolutedly refuse to patronize "gift" sales and are generally indifferent to trading stamps. They know that philanthropy is no part of business and that the word "free" is a bait for fools.

In our own industry, cases are cited where people who refuse a free electric flatiron or one sold at cost by the lighting company will pay the full list price to a contractor because they suspect the cheaper article is wasteful of current. One company which had a number of irons returned by customers after trial, endeavored to sell them at $2.00 each but found that purchasers preferred to pay $4.00 for new irons. The old irons were furbished up and looked like new, but people were suspicious; they believed the cheaper article to be more expensive in the long run. Another member company states that it made practically a failure of its sign business so long as it continued to make concessions, but that the business picked up and became established when the selling price on

signs was advanced to a fair figure. A large number of similar instances could be cited, all proving that the public knows that it cannot get something for nothing, and when such an offer is made, none but the unintelligent respond: the wise buyers "look for the nigger in the woodpile."

This brings us straight to a problem in public policy: Can we afford to let the public think either that we are selling an inefficient appliance or that our profit on the current consumed is sufficient to quickly pay for the device! It is generally admitted that either view upon the part of the public is undesirable.

The above is not intended to discourage legitimate "introductory offers" or special sales of appliances. These latter are successful schemes, they are used by reputable merchants everywhere, and they can be depended upon to create periodical enthusiasm and increase the demand for appliances. The special sale, however, should be strictly limited as to duration, should be vigorously advertised and promoted, and should be carried off with the same snap and go that characterize a department store "drive."

Of course there are exceptions to all rules. It may be policy to sell a motor equipment at cost or loss to get a considerable contract. Generally speaking, such a necessity can be overcome by offering the installation on long trial with an agreement to remove if the customer is not convinced of the true value of the motors. Or a rental scheme or installment plan can be devised which will take the immediate burden off the customer's shoulders and still maintain prices. Secondhand apparatus frequently solves this difficulty, and as a final resort, one may do the wiring free. It was pointed out by one company that if a single concession is permitted, the whole scheme of the Sales Room fails—that the principle which applies to a large power user applies equally to a small residence customer. In theory this is true: in practice it is not. Wholesale merchandizing is still a matter of barter: in retail merchandizing, the "one price" theory is firmly established.

Of paramount importance in considering the Sales Room policy is the attitude of the contractor, supply dealer and merchant. At present the market for electrical appliances is so limited that the merchant cannot afford to handle them; hence we must broaden this market to make it attractive to him. At present the average contractor's and supply dealer's place of business is so ill-equipped and badly managed (from the retail sales standpoint) that the public is repulsed; hence we must educate them to better merchandizing methods. Can this be done without a Sales Room? We think not. The ordinary Display Room does not set an example to the contractor. The policy of selling at cost does not encourage the merchant, but on the contrary completely alienates him. The establishment of a Sales Room, on the other hand, serves both purposes. The contractor finds even the small

amount of retail trade he once had is slipping away and discovers that progressive merchandizing methods are necessary to sales. The retail merchant discovers that electrical appliances pay good profits and that the demand is large enough to support a store devoted exclusively to this merchandize. He will quickly open a department. And these are the two ultimate objects of the Sales Room. They will never be accomplished so long as appliances are sold below fair merchandizing profit. They will be accomplished instantly when the central station demonstrates that these appliances are staple merchandize and can be handled like other staples.

* * *

So much for the theory of price-cutting. As to what has actually been accomplished toward the establishment of self-supporting or profit-earning Sales Rooms, there is little to be said—but that little is important.

Your editor visited the Sales Rooms at Chicago, Philadelphia and Rochester.

The first of these cities has what is, without doubt, the most beautiful sales floor in America. Tiffany's, the world-famous jewel house, cannot boast anything more perfect. The location is one of the highest-priced corners in the city; the investment in furnishings and stock is very great; the employees are well-paid. Yet this Room, established less than six months, is today practically self-supporting.

This Company's small sales-room, an office approximately 20 feet square located at the rear of the Contract Department, sells, roughly, $10,000 worth of merchandize a year.

Philadelphia likewise boasts a sales room most excellently equipped, located at a prominent shopping corner and manned by an adequate and well-paid staff. This Room sold, from April 1st, 1908, to March 31st, 1909, appliances to the amount of almost $20,000 upon which a gross profit of a little under $5,000 was made. This company says:—

"Regarding the matter of placing the Sales Room upon a true merchandizing basis, The Philadelphia Electric Company is quite in accord with this policy, and believes that it can be done. Our policy in this respect has changed somewhat. Two or three years ago we sold electrical apparatus at from ten to twenty per cent below list, with the result that the department stores practically refused to handle electrical apparatus, inasmuch as they could not make a sufficient profit to make it worth while. After conference with them, we changed our policy and put all electrical apparatus on sale at list prices, and have maintained these prices and have co-operated with the department stores in the endeavor to push the same. This policy has proven itself, we think, up to the present time, the better of the two. Department stores in this city have given special exhibits of electrical utensils for the home, and have advertised the sale of the same quite liberally from time to time. The manu-

facturers tell us that the business is growing quite materially, and the largest department store in the city has recently made a proposition for a special and long term exhibit, with liberal advertising feature affecting the same. We feel that the department store is in a better position to start this movement than is the central station, but we hope, in co-operating with the department store, to shortly place our Sales Rooms upon a sound commercial basis, and gradually to persuade the public that the central station is the place to purchase electrical apparatus of any and every description."

The Rochester Sales Room is somewhat peculiar. This being a combination gas and electric company, the gas appliances greatly swell the total of sales. Roughly, these sales are $350,000 a year and the average margin of profit is between 25% and 30% above cost plus freight. Owing to the Company's practice of charging service connections, advertising, charitable donations and sundry disassociated items of expense to the Room and lumping the whole under the Contract Department expense, it is impossible to figure the exact status of this Sales Room. However, a mental calculation shows gross profits of over $250 a day from which a considerable net profit should remain.

Representatives of the three above-named companies are doubtless present and will be able to supply more information if it is desired.

The managers of smaller plants will, of course, discount the experience of these metropolitan companies. However, there is evidence that the Sales Room is not alone a large city possibility but is a small town necessity. One company, operating in a community of 12,000 maintained a complete Sales Room, did wiring and sold everything electrical. The Sales Room and contracting business was charged with the wages of the wiremen, sales clerk and office rent, which expense it paid, still showing a handsome profit. As a by-product of the Sales Room, the extra time of the retail clerk and stock boy were used to read meters; the interior wiremen were used to maintain the Company's lines, poles and transformers; and the consequent saving to the operating department brought the earnings up appreciably.

The North Shore Electric Company of Chicago which operates a chain of plants in the suburban towns, has also had profitable experience. No dxact data were available to your editor, but the fact that this Company plans to establish a number of small Electric Shops similar to that in Chicago, is significant. This company has already proven as true that the Sales Room is a very strong and constant force to encourage, and where necessary, to compel the co-operation of the electrical contractor. Although these Rooms are in direct competition, the contractors find them beneficial, and the give-and-take policy mutually pursued makes business for both.

The theory of the Sales Room is one which seems to find general endorsement, but there are many steps between the idea and its consummation. The following general points are found to be common to those Sales Rooms which are successful.

* * *

1. Central Location in the best shopping district. The greater part of the Sales Room's custom comes from women of refinement. Go where such women are: do not expect them to come to you.

2. Attractive Stock of high class portables, etc., is necessary. The first principle of merchandizing is to attract and please.

3. Well-defined Departments are essential. Keep the various classes of goods separated and show only one of each kind. Keep the mechanical devices in the background, but convenient when wanted.

4. Equipment Must Be First Class and equal to that of the best retail store in your community. Inferior and makeshift fittings mar the majority of Display Rooms.

5. Make Good Window Displays. Study the windows of other stores and apply their principles. Remember that you are conducting an educational exhibit as well as a Sales Room.

6. Keep Interest Up, not only public interest but your own and your employees'. There should be something doing every day in the Sales Room. Study department store methods here.

7. Cleanliness is Imperative. A jeweler's stock should not be more spick-and-span. Keep the vacuum cleaner and the dust rag always at work.

8. Keep Honest Records. The books of the Sales Room should be as straight as those of a retail merchant. Charge to it exactly what it costs—no more, no less. Such records will interest local merchants and contractors some day.

9. Advertise the Sales Room. Make it the centre for all electrical wants. Study the ads of other merchants and use their methods.

* * *

The above suggestions are doubtless crude but it is hoped that they will serve to develop interest and action in the direction of the Sales Room conducted for profit. The subject of cut-price and free appliances has been enlarged upon because this evil is dangerous and unnecessary. Your editor has found many cases where a change to the policy of charging full value has met success, but no case where such change has reduced the sale of appliances. He feels that the time has passed when the industry requires a self-paid subsidy upon current-consuming devices and urges the adoption of a sound merchandizing policy for the appliance Sales Room.

Unexpected Returns from Advertising

Being an Evidence that Circular Letters are Being Read in Elmira

USUALLY when advertising matter is sent out by a central station to its prospective customers, if there is any doubt as to its efficacy, it is the fear of the waste basket that looms the largest. Here is a case, however, where the prospect has hit back letter for letter and paragraph for paragraph.

The letters were returned hot off the bat and every paragraph had its bracket and its individual parry. The reply was written in the margin in pencil, as printed at the right of the brackets.

RAY TOMPKINS, PRESIDENT
GEO. BULLOCK, VICE-PRESIDENT

S. J. DILL, GENERAL MANAGER

H. M. BEARDSLEY, SEC'Y AND TREAS.
A. S. COOKE, ASST. SEC'Y AND TREAS.

ELMIRA LIGHT, WATER & RAILROAD CO.

CITY RAILWAY LINES
INTERURBAN—ELMIRA & WATKINS
ELECTRIC LIGHT AND POWER

ARTIFICIAL GAS
NATURAL GAS
CITY WATER WORKS

RODICK'S GLEN THEATRE
RODICK'S GLEN PARK
MAPLE AVE. DRIVING PARK

ELMIRA, N. Y., April 1, 1909.

Poole Bros.,
East Water St.,
Elmira, N. Y.

Gentlemen:—

Does the whole neighborhood know where you are? An electric sign will make your store a landmark.

Every person within 100 miles knows where we are.

People are moving into your vicinity every day. They are looking for a grocer. The most attractive store will get their trade. Electric lights will add much to the present attractiveness of your establishment. They insure fresh, pure air, cleanliness and convenience, as well as an even brilliancy in every corner.

There are no places to rent in our vicinity—we have the cleanest grocery in Elmira.

Fruit, vegetables, canned goods, all your stock, in fact—will look better under the electric than under any other artificial light. On rainy or dark days they make it light as day.

We differ with you—our goods look better with gas light.

Our service lies at your door. As an advertisement, electric lights on your sign and in your window will pay you better than pages in the newspaper. The low rate will surprise you. Call 445 on either 'phone, and our representative will call at your convenience.

We never allow anyone to *lie* at our door. We always tell the truth which pays better than advertising.

Yours very truly,
ELMIRA WATER, LIGHT & R. R. Co.,
Per H. N. McCONNELL,
Mgr. Com. Dep't.

RAY TOMPKINS, PRESIDENT
GEO. BULLOCK, VICE-PRESIDENT

S. J. DILL, GENERAL MANAGER

H. M. BEARDSLEY, SEC'Y AND TREAS.
A. S. COOKE, ASST. SEC'Y AND TREAS.

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INTERURBAN—ELMIRA & WATKINS
ELECTRIC LIGHT AND POWER

ARTIFICIAL GAS
NATURAL GAS
CITY WATER WORKS

RODICK'S GLEN THEATRE
RODICK'S GLEN PARK
MAPLE AVE. DRIVING PARK

ELMIRA, N. Y., April 9, 1909.

Poole Bros.,
East Water St.,
Elmira, N. Y.

Gentlemen:—

Suppose we gave you a man to advertise your business all day and all night. Suppose he stood before your door and shouted every minute to the crowds. Would you not be willing to feed him?

No, he would be a nuisance. We had Fluffy Ruffles advertised to be in our place and no one came in and 600 stood in front.

We will give you something a hundred times better than such a man. People can see further than they can hear. An electric sign will put your name in the eye of the thousands of the crowds that pass for blocks around after dark.

We were known by all the people before Electric Signs were thought of.

Consider what an electric sign will do for you. During the day your sign hangs before your premises directing prospective consumers to your door. At night when the use of the ordinary sign ceases, you are still able to keep before the public by the magic of the electric light.

People do not have to look for our place. Every person knows where it is.

Realizing certain advantages, we will furnish you an electric sign at a fixed price per month. You are hereby able to determine the cost beforehand, and are also saved the annoyance of switching the current off and on. This means your sign with your name and business thereon may be used after closing hours, thus securing invaluable advertising obtainable in no other way, at such a slight cost.

We are from Missouri. Signs are no good after we close up.

If you will call 445 on either 'phone, our representative will be pleased to call and explain more fully at your convenience.

We are not ready for the undertaker yet.

Yours very truly,
ELMIRA WATER, LIGHT & R. R. Co.,
Per H. N. McCONNELL,
Mgr. Com. Dep't.

"It is to laugh" or words to that effect. All of which only goes to show that when a man is "agin the government" or "agin the lighting company" conversation and the divine right of argument is a great privilege and dear to his heart.

What Mr. McConnell's next move was is not known, but inasmuch as there are only two of the series, he probably went down and talked it over, with perhaps "a little more of the same" on the side. For there is no reason why this man should not be a good customer, all previous and acrimonious correspondence to the contrary notwithstanding.

A Lighting Suggestion from San Jose

From Felix J. Koch

THE City of San Jose has set an interesting example for combining street illumination with civic display, in the form of a great light tower. This structure rises up at the intersection of the two principal streets of the city with its four piers at the four corners.

As shown in the photograph the four uprights are bound together by hoops of steel and the light, a high candlepower arc, surmounts the structure. This not only illumines the intersecting streets, but serves as a landmark through miles of surrounding country and is a good medium of publicity for San Jose.

Light Tower, San Jose, Cal.

A Dollar Idea

E. A. Weile, New Business Dept.
North Shore Electric Company, Chicago, Ill.

HERE is an idea to put more light in the barber shop and help the barber build up his reputation for studied service. When a man goes for a shave or a hair cut, he wants to be waited on and he chooses the shop where he is made the most comfortable.

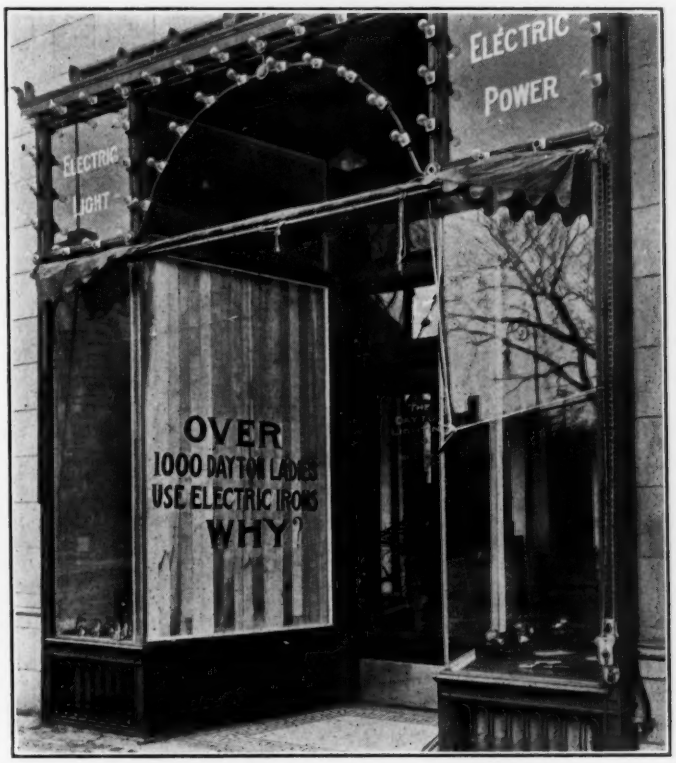
In several shops we have arranged bracket lights over the side waiting chairs so that at night when a man is waiting his turn and picks up a paper to read, the porter turns on the light over his chair. These lights are controlled by switches from one center, so that the man is not inconvenienced or annoyed by the porter reaching over his head to turn the light on. The above mentioned lights are, of course, tungsten lamps equipped with proper reflectors. This scheme has received very favorable comment from patrons of those shops in which it is used.

Another Dayton Window

An Example of Johnnie-on-the-Spot Advertising

MR. H. W. CHASE, Contract Agent, Dayton Lighting Company, Dayton, Ohio, sent in this photograph. He said: "We have experienced many severe wind storms during the last few weeks and Sunday, May 2, 1909, the climax came. The front of our display room blew in which occasioned us considerable inconvenience. sioned us considered inconvenience. sign painter, however, and made the best of the situation."

This is an example of the spontaneous publicity that makes irresistible appeal, because any evidence of real Yankee ingenuity always arouses a certain enthusiasm. Pine boards in a show window won't display goods, but they can be made to advertise them and Dayton points the way.



A Dollar Idea

By R. S. Hale, Supt. Sales Dept.
Edison Electric Illuminating Co., Boston, Mass.

HERE is a card which we send out to every prospective customer as soon as he has signed a contract. Unavoidable delays will often prejudice a man against the company before we have really begun to do business. We use this card as a preventative.

Please Read This Notice That May Save You Trouble

When you sign an application card, or agreement, it is not necessarily certain that we shall be able to supply you with electricity. For instance, the municipal authorities may refuse to issue the necessary permits, and on the other side of this card you will find some of the reasons that may cause delay.

BUT

if you do not get electricity and do not know why, please fill out the coupon mailing card below, put a one cent stamp on it and mail it, and our information department will look the matter up and report to you. Or you can call our information department on the 'phone (Oxford 3300 collect) and they will report to you either at once or later.

To Information Department
Edison Electric Illuminating Co.

On_____ 190 , I signed application for electricity at

No._____ Street_____ City or town

This must be filled out exactly, otherwise we may not be able to locate your application.

The wiring has been completed and I understand that the wiring has been inspected and passed by the proper authorities. Please let me know when you expect to turn on the electricity, or what you are waiting for.

Name_____

Address where information is to be sent if different from place where electricity was applied for.

_____

_____Phone No._____ _____

Possible Reasons for Delay in Connecting Service

For most of the services in the various cities and towns, we are not allowed to turn on the electricity until **we have received** a permit from the city authorities.

We apply for such a permit when we get your application but the city inspector does not examine the work until he gets notice **from the wiring contractor who did the work**, or from you as owner, that the work is ready for inspection.

If there is delay in getting permit from the city we can do nothing. It is for you and your wiring contractor to hasten the matter.

Another possible reason for delay is that you may have applied for electricity in some place where we have no service in building so that we have to build new lines. This usually involves digging up the street, or setting new poles, for all of which we have to get permits sometimes from five and six departments of the city, and we may have to ask you to do something additional to merely signing the application. If such is the case, we will notify you as soon as possible.

Occasionally, it happens that the installation is such that if we supplied it with electricity it might affect our other customers and make their lights flicker or work badly. In such case we should refuse to supply you until the matter was adjusted, but your wiring contractor knows the requirements of our system, or can easily learn them, and this cause of delay is more theoretical than practical.

In the suburban districts, the distances are so great that we can only make trips at intervals, usually about a week apart, hence if your lamps and meter should happen to miss just one week's trip, they would have to wait over till the next trip.

In any case, please remember that **we** are losing income every day that delay occurs. If unnecessary delay occurs, it is never intentional on our part, but always accidental and we shall be obliged if you will help us to hurry the matter up so that you may get your electricity, and we may get the income.

TIME TABLE

CASE A—Service meter and lamps in; nothing to do but turn on electricity.
Minimum Time ½ day
Average Time 2 days
Please enquire after 3 days unless delay is explained by above memoranda.

CASE B—Wiring and service completed; Meter and lamps wanted.
Minimum Time 1 day
Average Time 4 days
Please enquire after 7 days unless delay is explained by above memoranda.

CASE C—Service not in, so that new lines, poles or digging required.
Minimum Time 3 days
Average Time 10 days
Please enquire after 14 days unless delay is explained by above memoranda.

Affix
1c
Stamp
Here

Information Department,
Edison Electric Ill. Co.,
39 Boylston St.,
Boston

"*Tactful Relations With Customers*"

II. There May be "Enquiries" but Never "Complaints"

By Herbert Alden Seymour

"THE Operating Department can use words that are tabooed in mine," declared the General Contract Agent.

"For instance?" said his friend, who adjusted disputed bills for a large company in a neighboring city.

"'Complaints,' for instance," said he, with emphasis. "I've given my people to understand that we never have any 'complaints.'"

"Great Scott! What are they—testimonials?"

"Yes, they are; and in the same way that a squeak in moving machinery is a testimonial to the presence of friction between the parts. But we don't call them testimonials; nor yet 'kicks', nor 'knocks', nor 'hollers'; nothing like that. We call them Enquiries. Isn't that a lightning arrester?"

"Yes, I think so. Still, 'a rose by any other name'—"

"Shakespeare never managed a central station new business department. In his time no one dared complain about anything except the weather, and if he did much of that he sat in the stocks for it. On the other hand, the chief business of some people, nowadays, is to play the small dog that runs out into the road and barks furiously at an 1800-pound carriage horse thundering along the asphalt. They have an ingrowing grouch concerning all public service enterprises, from the milkman to the central station. Their creed is that everybody is trying to swindle them, overcharge them, and short-change them. Like the small dog, their chief joy is to hear themselves bark. They are the company's pets.

"'Our inspection department will take the matter up at once,' we say. 'Perhaps there is an error somewhere, although the bill does not seem unduly large for this season of the year,' etc., etc. And when writing them on the subject we say: 'Our inspection department finds all the lamps in the sockets, and the wall switches in perfect working order, and our meter department has made a careful test of the meter installed in your premises, has checked the reading, and reports that the instrument is registering accurately. That rings in two 'departments' on them, and the signature brings in a third, and if we could conscientiously convey the idea that our president had examined their wiring, and that our secretary and treasurer had superintended the meter test, it would help a lot. But they'll bark again as soon as they can get their breath. It's a habit."

"I don't see that your idea will do much good, then," said the other. "But your system of 'taking the matter up', deferring your decision, and letting the complainant—beg pardon, I mean the enquirer—cool off a bit before trying to close the subject is one of the simplest and best methods of dealing with some of these hotheads. It gives them a chance to bark twice on one excuse, and they're tickled to death."

The G. C. A. laughed. "'Taking

the matter up.' What would this world do if we couldn't 'take matters up?' That is the old original safety valve—attached to the other fellow—and we can always release it for him. It is to chortle."

"Yes, indeed! And we can afford to wait while the pressure goes down. So you think calling them enquiries will help some?"

"I know it will. The human family embraces something beside small dogs. Many customers enter this office to see someone about matters that really require adjustment and thoughtful handling. Perhaps some are in such mood that the slightest prejudicial cause will set their minds firmly in the wrong view of the situation. Very well. Suppose that the first thing they see in large letters on a door is 'Complaints'. 'Aha!' says their evil genius, 'complaints', eh! Of course they have barrels of them; enough to keep a department busy. Some smooth talker paid to convince you that black is white, and that although you have taken the lamps out of the sockets in the servant's room and the kitchen, and have been going to bed earlier than usual just to economize on light, you owe the company more money for those very reasons. They know about it, and have it in for you.' And the erstwhile good customer determines he will not be 'bluffed' or 'deceived'. Why, his is a harder case to handle than the other; and we made it so.

"About the worst oversight a manager can show is to locate the trouble mesmerizer prominently in the general office where people throng daily. Only one thing goes ahead of that, which is the placarding of the place with the words 'Claim Department'. A bull is color blind to red compared with the natural tendency of some people to act on that suggestion. It's like giving a kid 'a lief' in snowball time. What can you expect but a slushy swat? It's too bad that people have been educated to look for the official anvil in concerns like ours. It encourages them to carry a maul.

"It reminds me of a teamster whose horse had been slightly hurt by a wagon belonging to one of our large companies. He promptly mailed them a bill for damages, addressing it ingenuously to 'The Blame Agent'. You can jot it down in your note book that there is something in a certain species of human breast that responds to the suggestion of that term, Claim Department, with the glad cry of 'Lead me to it.' Except for that many of these loud explosions would be in shop talk, inaudible brush discharges, instead of fat jump sparks with a bad heating effect. But I suppose claims for damages are usually more tangible."

"They puzzle you sometimes, though," said the man who adjusted many of them. "I remember a case way back in the days when chemical meters were still in use. A newly married couple settled in a nice house, and Hubby had the electricity turned on for Dovey. A couple of months later we received a letter from the young man saying that our meter reader had somehow cracked a couple of the acid bottles, and the stuff had leaked down into a clothes closet and spoiled some of his wife's things. I was sent up to investigate. I found the lady at home and asked to see the damaged articles, but she refused. She claimed she had the ruins, however, and stated their original cost.

But that was the end of the line, so I took a transfer and hied back to the office. On hearing my report the Superintendent regarded me quizzically and remarked, 'You should have engaged a chaperon for the occasion.' Then he rang for his stenographer. 'Miss Ruffles, will you please call on Mrs. H. and report to me the cash value of some damaged wearing apparel. We can't adjust the claim without visual evidence. Here is the customer's letter about it.' Miss Ruffles reported next day without difficulty and the matter was speedily settled.

"I granted a rebate last week," said the new-business man, "although the bills were correct." This was an unusual case. The customer was honest in making his claim, and I allowed it because the remote cause was the negligence of one of our employees who did not post the man on a certain important point. We must remember that the general public is not yet sufficiently educated in elementary electricity. Electrical terms are deep, dark mysteries to most customers, anyway. To some of them Greek would be as easy as words of one syllable are to a Boston school teacher with the comprehension of 'Kilowatt hour', 'Maximum demand', 'load factor', and a few other root words of a central station man's vocabulary. And one of the worst pitfalls of the young and inexperienced solicitor is the Oriental guile of some customers, which forbids them to declare that they don't understand any of it, can't spell it and therefore can't look it up, and can't remember it long enough to ask a friend who might know. It's simple to the solicitor, that is if he isn't extremely inexperienced; and he forgets that he, too, looked and talked wise about it for a week when he first entered the game, in a way which, if known and appreciated, would qualify himself and all his blood relations for charter membership in the Ananias Club.

"When we hook up a new power customer, for example, and he adopts electricity and new methods, it's up to us to make certain that he can distinguish positively between the rheostat and the commutator. And more than that, it is our duty to courteously exercise a kindly supervision over his application of our product. Unnecessary consumption of it is not to be tolerated; not, at any rate, without explanation and protest from us. Make it a matter of record, and keep after it. Know what your customers are doing with the service, and encourage in every way the legitimate expansion of its use, but advise against over enthusiasm. Electricity will do almost everything and do it well, but it won't calm an outraged conscience or recover a lost reputation for probity. Neither will it heat a residence as cheaply as a coal fire. So don't let the customer rely on it for those purposes. He'll simply blame the company for the failure."

"'I'll give you the best recipe for handling—er—'enquiries'", said his friend. "Smile."

"It's a dandy," agreed the other. "After all there's nothing like a judicious injection of humor for these sour ones. It'll sweeten a lemon.

"And if your funny-bone isn't working, inject some plain good-humor. Don't be too serious about it, except with those whose troubles are not serious at all. Some of those are

the worst. Then put on the agony, 'departments', and everything similar. Above all 'take the matter up.' "

His friend roared.

"I tell you," said he, "the man who can smile and make the other fellow smile too, and still be adamant with the presuming or dishonest ones, is the public service corporation's strong man. There is a flat top desk waiting for him in a front office, although perhaps no one knows it—yet."

A Dollar Idea

By H. R. Staples, Asst. to Pres.
Ventura Power Company, Oxnard, Calif.

BEFORE the advent of the commercially approved tungsten lamp, the streets of two of our towns were being lighted by ordinary 16 and 32 cp. carbon filament incandescent lamps of 250 V. connected in multiple and current furnished on meter measurement. The streets in both of these towns were from 60 to 80 feet wide and lamps were suspended to hang in street centres by wires leading from poles on each side of streets, and the weight of the Cutter Street Hoods, with which each lamp was equipped, maintained a comparatively steady position of each.

Wishing to benefit by the efficiency of the tungstens and at the same time furnish much-increased street illumination, we contracted (after tests of two 110 V. tungstens in series across the 250 V. service) with both city governments to furnish double candlepower upon a flat-rate basis, at an increased cost to them of but approximately 55 per cent. Thus we find that the regular 110 V. multiple tungsten lamp stands punishment very nicely in a swinging position, and in a section which is often subjected to high winds. Our installation is, we believe, the first of its kind in the country.

Our Business and Yours

A Practical Appliance Directory

IN the June issue of the *Electrical Record*, 52 solid pages are devoted to a classified directory of electrical appliances for light, heat and power. Cuts of over 280 such devices are shown and with each is a brief description of the article and the name of the manufacturer. No standard apparatus, such as lamps or motors is included, but apparently every possible application of electricity for physician, dentist, grocer, butcher, machine shops, etc., is covered.

The value of this data to the commercial man can hardly be exaggerated. Here are, probably, with a few exceptions, all the solicitor's side line suggestions classified and illustrated. A good many are familiar to all of us; there are many that come as a surprise—if they are new to the central station man they are in all probability unknown to the merchant and manufacturer.

In a great many cases, there is undoubtedly more strength in the suggestive appeal of the small labor saving and comfort carrying device than in the straight economy argument for light or power. Moreover, the man who in talking to a prospective customer can give him information about his own business and evinces a familiarity with its detail, compels attention and respect.

For the central station commercial man whose files are not complete—and the proportion of such will probably be large—here is an opportunity to be welcomed. Take this list in the *Electrical Record* for the month of June, communicate with the manufacturers, secure their bulletins, prices and full information, whip it into shape for the data book and then *sell the apparatus!*

There is a wealth of appliance business to be developed among present consumers, both residence and commercial, but it requires salesmanship and work. And the first step is the leaf in the data book.

Booming Hamilton, Canada

THE Publicity Commissioner of the city of Hamilton, Canada, has recently sent out a very efficient little booklet entitled "A Kettle of Facts about Hamilton." In it appear all the arguments available in favor of that city as an industrial centre. On the outside back cover is a cut of the power plant of the Dominion Power & Transmission Co. It is interesting to observe that the fact that Hamilton offers cheap electric power and reliable service is emphasized in a most prominent manner and the city itself is called "The Electric City of Canada."

This is the result of central station

activity and it shows the virtue of harmony and participation. Mr. Thomas F. Kelly, the Contract Agent of the Hamilton Cataract Power, Light and Traction Co. is a live commercial wire and the progressive spirit of his company, the excellence of the electric service and the value of electric power to the city are being impressed on the local public and to the continent at all times. As an indication,—Mr. Kelly appeared in Atlantic City last month to attend the N. E. L. A. Convention with a specially prepared personal card. On the back was printed—

HAMILTON "THE ELECTRIC CITY OF CANADA"
WANTS INDUSTRIES

MORE AMERICAN INDUSTRIES HAVE LOCATED BRANCH FACTORIES IN HAMILTON THAN IN ANY OTHER CANADIAN CITY

WHY?

HAMILTON WITH THE CHEAPEST ELECTRICAL ENERGY ON THE CONTINENT TOGETHER WITH ITS MANY OTHER ADVANTAGES, SUCH AS IDEAL RAILWAY AND WATER FACILITIES, CHEAP LAND, LOW TAXES, ETC., ETC., IS THE MOST DESIRABLE SITE

WRITE "KELLY" FOR FURTHER PARTICULARS

A good number were in circulation and on his return the Hamilton papers made considerable favorable comment.

What is the result of it all? Hamilton is being exploited far and near as a prosperous and growing industrial centre, and American manufacturers are invited to locate there and turn out their product for the Canadian market duty free. And because the local central station is following up good service with active intelligent publicity, and is working side by side with the city in campaigning for city growth, cheap electric power is called Hamilton's greatest advantage. Moreover, the power company is known to the people as one of themselves; it is seen that their interests are identical, and the effect on the company's business is not hard to foresee.

The Tungsten Sign Lamp

THE Engineering Department of the National Electrical Lamp Association has issued a bulletin (No. 6-E) on the subject of tungsten sign lamps, 1⅓ watts per candle. The General Electric Company has also sent out some interesting data and it opens up a new field for central station commercial work.

The tungsten sign lamp brings the same opportunity for the developing of sign and outline lighting that we have seen in the field of interior illumination since the invention of the tungsten of larger power.

Sign and display lighting—electric advertising—has not gone very far in most cities because the cost is so high, both for the installation and the maintenance. But here is a lamp that will burn 2000 hours consuming only 5

watts and producing 4 cp. in light. This is a saving of 15 watts per lamp or 30 kw. hours on the life of each lamp; and with the initial cost of the lamp only from 20 to 25 cents more than the carbon lamp it displaces! And just as in the case of the Welsbach mantle, and the larger tungsten, the increased volume of electric advertising which will spring up with the introduction of this lamp will more than overbalance the loss in revenue from the present connected load.

There is no class of business as self-selling and cumulative as signs and display lighting, and the effect of a higher lamp efficiency is bound to be broad and fast. Go to a customer and show him how to cut his current cost way down, and he will talk your generosity to your profit. Follow this up with a campaign to your prospect list and the new figures will carry it through.

The ingrained competitive spirit among merchants can be always counted on, and the tungsten sign lamp promises big things for electric advertising.

Articles on Salesmanship

THE recent consolidation of the two magazines *Profitable Advertising* and *Selling* is worthy of note. The old names are combined and the title of the new publication is *Advertising and Selling* which is a clear statement of its scope.

After all, selling electric current is just plain merchandising—the retailing of a commercial product—and general methods and policies of advertising and selling apply.

The central station commercial man works with a peculiar problem, but fundamentally he is selling to the public, the identical public that buys from the department store and the manufacturer. Consequently the experience of merchants in other lines, the record of their successes in selling to the common market—the public—is all fraught with vital significance to him.

The theory of retail business—salesmanship — advertising — has evolved from the first barter and it is all embracing. No man who sells to the people can afford to disregard the opinions and the processes of other merchants—be their wares however different. The public is ever the same public.

A series of articles will appear in the July and August issues of *Advertising and Selling* by Mr. John E. Kennedy on the subject of "Intensive Advertising." Mr. Kennedy is famous in the advertising world as "Reason Why" Kennedy, the highest priced advertising specialist in the country, a man who charges $2500 for ten advertisements.

These coming articles will interest every man who sells electric current. The theme will be advertising pure and simple, but advertising means influencing the public to buy, and on that depends the prosperity of every central station. This is an opportunity not to be neglected.

Not Afraid of House Organs

NOT many months ago a certain manufacturer began the publication of a house organ. It was announced that it was to be conducted on broad lines, and educational in character.

It so happened, however, that the name chosen for this house organ was very much like the title of one of the minor trade papers in the field. The editor of this magazine straightway became very much startled, vexed, indignant and combative withal, and lifted up his voice to high heaven in witness of the fact that here was an unwarranted and indefensible affront to his paper and a malicious encroachment on his eminent domain. He felt that the manufacturer should stick to manufacturing and keep his hands off the copy sheet and his mind off the printing press. Inasmuch as he, the editor, did not compete in the field of manufacture and sale, why should the manufacturer try to usurp his prerogatives and jostle him in his work of education? In other words he felt that there was not room for too much education and that the publication of house organs would over-stock his market.

Now, The Rae Company, owners and publishers of this magazine, SELLING ELECTRICITY, also edit and publish two flourishing manufacturers' house organs—house organs that are largely educational in character, that absorb much material that might otherwise qualify for the magazine, and that are distributed widely without expense to the recipient. This is a pretty plain exposition of our attitude towards house organs and contemporaneous effort.

The world is a large place, with a great many people, widely scattered. We cannot hope to reach them all ourselves, and we can only deliver our message just so many times to those we do reach. Yet it is to our interest, to the interests of all who work in the world of electricity, that the Gospel of Broadening Progress be preached abroad as constantly, continuously and consistently as possible.

Therefore, if a man but have the right view point and be headed for the same golden goal, we see no reason why we should not welcome his aid.

We are all working for the development of a greater market and a greater resultant prosperity and anyone who is headed the same way can come along and help. You, the central station men, are devoting your effort to the non-consuming and partially consuming public; we are trying to aid you in the creating of this initial market. And after all is not the entire bulk of manufacturers' publicity directed in some way towards the same good end? It may be general magazine advertising which goes direct to the public; it may be a house organ directed to the contractor, or the architect, or the dealer or lighting company; it may be catalogue or trades paper advertising intended to influence any one or combination of these; and still every word is written, every dollar is expended with the sole purpose of selling some product which will directly or indirectly improve, or cheapen, or tend to increase in some other way the popularity and sale of electric current.

Unquestionably there is much printed matter circulated through the mails and trash baskets that is unavailing and a nuisance, but we feel strongly that there is room for all the house organs published and more to come if they have the right point of view, and

the modern broad-gaged objective and are willing to play the game of co-operation.

SELLING ELECTRICITY is all for mutual service, editorially, in the Table of Contents and in the advertisements in no less degree. Our advertisers are ready to work for you, their offers of co-operation are sincere, and our contributors are writing to the same good purpose.

Therefore, we say, there should be no obstruction. Prosperity lies in the broader market and we are all headed the same way. If the house organ will step in line and help along, it is a booster for the common good. Let it come.

News and Reviews

Mr. Gilchrist, Secretary of Industrial Club

John F. Gilchrist, assistant to the president of the Commonwealth Edison Company, has been elected secretary of the Industrial Club of Chicago—an organization of influential business men which deals with the larger topics of political and commercial advancement.

Marking a Jovian

When I was in Chicago last fall, says E. M. Scribner of the *Jovian Bulletin*, I noted that T. G. Grier had on the door of his office a miniature of the Jovian insignia in red, with the potentials of the various members of his force, and am wondering if it would not be a good plan to make this general. To the stranger in the city, it offers the suggestion of a visit and a friendly fellow Jovian within, ready to extend the hand of good fellowship.

H. M. Beugler

Mr. H. M. Beugler, who was until recently in the service of the Elmira Water, Light and Railroad Company, has gone with the Newburgh, N. Y., Light, Heat & Power Company and will have charge of the electrical department of the business.

Electric Lights as Memorials to the Dead

A church in New York has adopted a novel means to raise money to pay off a debt, which consists in the use of electric lights as memorials to the dead. A huge altar electrolier includes name-plates as part of its winding vine decoration, about each of which is a cluster of 10 incandescent lamps. Subscribers desiring the prayers of the congregation for their dead pay $1,000 for each light. The name of the deceased is then inscribed on the plate above the cluster of lights and one light is lit, to be kept burning at all services. The payment of each successive $1,000 means the lighting of another light, the maximum amount being $10,000 for each name. Eighteen of the name-plates have already been subscribed for and 30 lights purchased. The memorial is so constructed that it can be lengthened and enlarged almost endlessly, and the pastor of the church is reported to be looking forward to the day when it will reach the high vaulted ceiling and start twining its way along the sides of the chancel.—*Electrical World.*

Wheeler Catalogue Ready

The illustrated two-volume Catalogue of the Wheeler Gift of books, etc., to the American Institute of Electrical Engineers, edited by William D. Weaver, which is the most complete list of electrical books ever prepared, is completed and is being distributed to the members and associate members of the Institute.

Federal Sign System in St. Louis

The Federal Sign System (Electric) has recently opened up another branch office at 1230-1231 Syndicate Trust Building, St. Louis, Mo. This makes eight offices in all which this Company now maintains—one in each of the following cities: New York,

Cincinnati, Kansas City, Philadelphia, Louisville, New Orleans, St. Louis and Chicago. In each of these cities the Federal Sign System (Electric) has developed a considerable sign renting business as well as a large sales business of electrical fixtures of all kinds.

A Turn-Down Tungsten

The Economical Electric Lamp Co. of New York has sprung a new turn-down novelty on the public. This lamp has a 1 cp. baby filament of carbon, but the high light filament is tungsten consuming 35 watts and giving 27 cp. of light. The tungsten filament is only about half the length of that of the regular standard tungsten and is therefore exceedingly strong and durable.

C. E. Rose

Mr. Clarence E. Rose has been appointed superintendent of sales in the lighting department of the Little Rock Railway & Electric Company, to succeed Mr. Chas. E. Mathes, resigned. Mr. Rose has been connected with the properties owned by the Newman interests and operated by Ford, Bacon & Davis.

E. J. Richards

E. J. Richards, superintendent of the Newburgh (N. Y.) Light, Heat & Power Company, has resigned from that company and joined the forces of J. G. White & Company, of New York City.

Cost of Pumping

The cost of electric pumping at Cripple Creek, Colorado, is estimated to be half of that of pumping with steam. A low rate is offered for off-peak use.

N. E. L. A. Convention Papers

The book of Proccedings of the thirty-second convention will be hurried forward as rapidly as possible, but members wishing to procure sets of the papers before the book is ready can obtain them from the secretary's office at four dollars for the complete set. This sounds rather large, but it is, if anything, less than the actual cost of the papers. As nearly as can be estimated, the book this year will have to be issued in three large volumes, each about the size of last year's book. As stated above, the book will be brought out at the earliest moment possible, but a work of such magnitude can not be accomplished in a moment—however strong the current applied.—*N. E. L. A. Bulletin.*

Isolated Plant Controversy

Some very interesting discussion is going on in the pages of Building Management (Porter, Taylor & Co., New York, publishers) regarding the advantages and disadvantages of isolated plants in office buildings. The central station man interested in this subject should not fail to secure the April and May issues containing these articles.

More Good Sign Data

The A. & W. Elec. Sign Co. have just sent out a sign folder that is worth a place in every sign salesman's pocket. It is not large, but it shows night photographs of three electric signs on store fronts, each with an attractive fountain feature at the top. But alongside of each cut is a reproduction of a testimonial letter—from the owner—also full data as to size, consumption, etc.

This is the kind of printed matter that works in hot weather—it tells its story in a few words.

Electric Dynamite Thawer

An electric dynamite thawer is in successful use at the Roosevelt drainage tunnel in Colorado. The powder house is equipped with large electric heaters which raise the temperature of the room to 80 degrees in half an hour at a cost of ten cents daily for electric current.

Barbecue in Montgomery

The Montgomery Light and Water Power Company of Montgomery, Alabama, gave a grand barbecue on June 20th for the entertainment of their employees and friends.

George Williams is still down there Dohertyizing the plant and was among those present. There were over 1000 guests and in spite of a bad rainstorm the barbecue was a great success.

The scene of action was Tallahassee Falls, where the company's plant is located, about three miles from Montgomery.

Signs for Central Stations

An interesting bit of news to the man who is building the central station load is the announcement that Mr. Benjamin Wall has organized a central station sign department for Betts & Betts of New York City. Mr. Wall is the man who constructed and erected the famous Colgate sign, which contains the largest clock in the world. This sign is blessed daily by the numberless Jersey commuters. The sign itself exceeds in size any other sign ever built. He is also responsible for a large proportion of the big displays on the Great White Way.

Benjamin Wall

The firm of Betts & Betts, "electrical advertisers", have devoted their attention heretofore mainly to the designing and manufacturing of advertising displays, large and small, for the national advertisers—The Regal Shoe Co., Everybody's Magazine, Huyler's Candies, Cunard Steamship Company, United Cigar Stores, etc. Mr. Wall has been retained as the man best qualified to develop a business with the central stations and to produce signs which will sell goods for central station customers.

Mr. Wall has the central station point of view, having been for some time General Manager of the Metropolitan Engineering Company, and has gained large experience as a practical sign builder, as producer of over 7000 electric signs during his connection with that company, a great many of which were sold directly to central stations throughout the country.

Night Baseball

On June 19th, in Cincinnati, a game of baseball was played by the light of numerous arc lamps. A big crowd was attracted by the novelty of the scene and it was said that it was possible to see perfectly, also the players were apparently able to judge the ball without trouble. The illumination was secured by the use of arc lamps surrounding the field at various heights.

Frank D. Murpny

Mr. Frank D. Murphy has been appointed Manager of the Commercial Department of the Elmira Water Light & R. R. Co. of Elmira, N. Y. Mr. Murphy fills the vacancy caused by the promotion of Mr. H. N. McConnell, who has taken charge of the commercial department of the Colorado Springs Light & Power Co. Mr. D. F. Harrington has been made Assistant Superintendent of the distribution system in Elmira.

Fourteen Stories of Electric Signs

The old Metropole Hotel, on the corner of 42nd street and Broadway, New York City, is being torn down and in its place will be erected a building unique in the annals of sky-scrapers. The building proper will be raised to six stories but in the centre will be a tower thirty feet square which will extend up for fourteen stories more, or to a height of two hundred feet from the sidewalk.

The sides of this tower will be windowless for this part of the building is to be constructed solely as a foundation for electric signs.

The building has been designed in the English perpendicular Gothic style, with long perpendicular members emphasizing the height. The tower has a top treated in a similar manner, though in more ornamental fashion.

All of the skill of the electrician will be utilized to make this tower a beautiful as well as a striking feature of New York. It is declared that the advertising on the

tower will not be objectionable, but will be arranged in such an attractive manner as to form a beautiful architectural effect by day and tower of light by night.

Contracts will be made for advertising space just as in a magazine, though it is probable that the advertiser will have to provide his sign subject to certain restrictions. No announcements have been made as yet by the manager of the building, however, as to how the business will be handled.

This will certainly be a wonderful site for electrical advertising for the building will stand just opposite the Times Building with a clear view east and west on Forty-Second street and north and south on both Broadway and Seventh avenue. The building, it is expected, will be completed by the first of next January.

Mammoth Demonstrations in Denver

The Denver Gas and Electric Company, of Denver, Colo, has recently scored a remarkable success in its attempts to bring before the public notice its special appliances for household use.

For two weeks during the latter part of April Mrs. E. O. Hiller, a demonstrator of national reputation, gave a series of cooking lessons which covered every subject of cooking. Nearly half of her time was devoted to the demonstration of electrical cooking appliances and the various appliances used to lighten the work in the household. The first few demonstrations were held in the assembly hall of the company, but this was found to be too small and the public was asked to go to the Brown Hotel. This also proved inadequate for the large number who wanted to see the various appliances demonstrated, and the company hired the Auditorium, where the National Democratic Convention was held last year. At this place the average daily attendance was about 5,000. At the only evening session held, and which was given over entirely to electrical appliances, the attendance was in the vicinity of 10,000. The management of the company believes that it has never done anything more effective to draw the attention of the Denver women to its cooking appliances, and large sales are now reflecting the good that was done by the demonstrations.—*Electrical Review and Western Electrician.*

W. A. Reichert Leaves Ft. Wayne

W. A. Reichert, for the past three years Advertising Manager for the Fort Wayne Electric Works, Fort Wayne, Ind., has resigned to accept a similar position with

W. A. Reichert

The Power and Illuminating Engineering Company of Alliance, Ohio. This company is a commercial organization co-operating with central stations to increase the day load on their plants.

Electric Totem Poles

Totem pole electroliers will be an illuminating feature of the Seattle exposition. There will be 30 of them. These totems with lights suspended from the beaks of the birds will be placed on Rainier Avenue. —*Journal of Electric Power and Gas.*

Convention Brooklyn Edison Section N. E. L. A.

The Brooklyn Edison section of the National Electric Light Association held its first annual convention at Oriental Hotel, Manhattan Beach, on June 27. Nearly 300 members were in attendance. Mr. W. C. L. Eglin, past president of the N. E. L. A., attended the evening session and addressed the convention on the subject of

the relationship between the parent and branch organizations. In addition to several of local character, a number of the papers presented at the recent convention in Atlantic City were read in abstract and discussed.

Mr. Joseph F. Becker (General Agent) was elected Chairman of the section for the ensuing year.

Illuminated Signs in Subway Cars

The McAdoo subway cars in New York City are to be equipped with a sign hanging in the center of the car on which the name of the next stop will appear in letters of light. The names are changed by the guard by shifting a plug in the switchboard at the entrance to the cars.—*Electrical World.*

Indiana State Convention

The Indiana Electric Light Association Convention will be held at French Lick Springs, Aug. 18 and 19, 1909.

Jovian Lunch Clubs

The list of Jovian Lunch Clubs grows steadily. It now embraces the following cities:—

Atlanta, Ga.—Wednesdays at 12.30 p. m. at Merchants' and Manufacturers' Club, Chandler Building. H. T. Bechtel, President; Harry Nichols, Secretary.

Buffalo, N. Y.—Saturdays at 1 p. m. at Hotel Statler. C. W. Underwood, President; Emmet Fleming, Secretary.

Dallas, Tex.—Tuesdays or Wednesdays at 12:30 p. m., at the Southland or Oriental Hotels. C. W. Hobson, President; W. P. Upham, Secretary.

Los Angeles, Cal.—Thursdays at 12:15 p. m., at Hotel Hollenbeck. H. Conger Bowers, President; C. H. Carter, Chairman Entertainment Committee; R. B. Clapp, Chairman Finance Committee.

Philadelphia, Pa.—Thursdays from 12 to 2 p. m. at Continental Hotel, in the large private dining room reserved for the purpose.

Rochester, N. Y.—Thursdays at 12:30 p. m. J. B. Eaton, Secretary.

Toronto, Ont.—Fridays at 12:30 p. m., at McConkey's Cafe, private room. W. W. Lovell, President; J. H. Hall, Secretary.

Joint Convention in Wisconsin

The Northwestern Electrical Association and the Wisconsin Electric & Interurban Association held a joint convention at the Grand View Hall, Wanpoca, Wisconsin, on Monday and Tuesday, June 28th and 29th.

To Develop Central Station Loads

The announcement of the organization of the Power & Illuminating Engineering Co. should be of great interest to every central station.

It is generally recognized that many of the smaller stations cannot afford to provide the staff and organization necessary to thoroughly cover their territory and produce the maximum consumption. The Power and Illuminating Engineering Co. has organized to serve such central stations on a basis of compensation for absolute results in kw. connected.

Mr. W. A. Reichert, Advertising Department, says:

"There is unquestionably an immense field ready for development. There are towns and small cities all over the country where the per capita income is as low as two dollars, and largely because the present consumer is neglected. Yet the central station lacks the facilities for working up per capita figures to the possible six dollars or more.

"The Power & Illuminating Engineering Co. is an organization of men well known in the electrical world, and well qualified for such work. They purpose to enter into contract with central stations to build up both the power and lighting loads, to broaden the peak and straighten out the load curve and to secure additional consumers along existing lines. The company will actively campaign in the central station's territory, introducing motor drive, small motor driven appliances, high efficiency illumination equipment, and sign and display lighting and endeavoring to improve the station load factor in every way possible."

The headquarters of the Power & Illuminating Engineering Co. will be in Alliance, Ohio. The officers of the company are: W. B. Wilkinson, President, Pittsburgh, Pa.; J. H. Forbush, Vice-President and General Manager, Alliance, Ohio; H. H. Hosford, Secretary, Alliance, Ohio; Mr. Keever, Treasurer, Columbus, Ohio.

The Fort Wayne Oscillating Fan

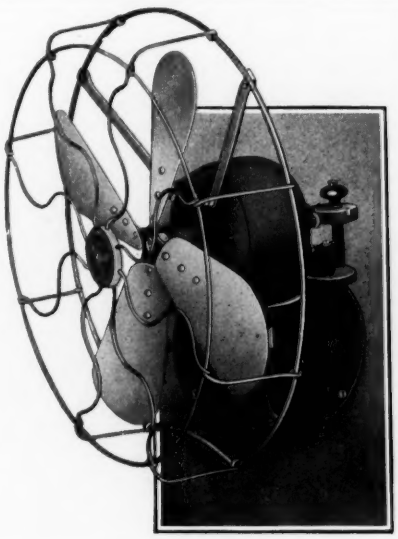
FOR ALTERNATING AND DIRECT CURRENT CIRCUITS

12 and 16-inch Sizes

Desk and Wall Bracket in One

This is the Oscillating Fan you can furnish to your customers this season at a profit. It gives satisfaction wherever used.

Have you seen our 1909 Fan Motor Catalogue? Ask for it today. It shows everything in Fan Motors.



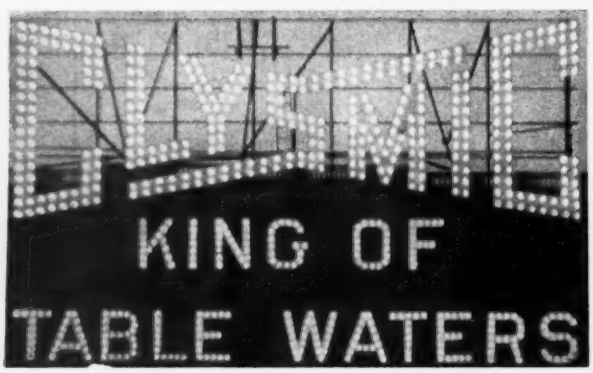
Sixteen-inch Oscillating as Wall Bracket Fan

Fort Wayne Electric Works

Main Office: Fort Wayne, Ind. Factories: Fort Wayne and Madison

SALES OFFICES:

Atlanta	Chicago	Grand Rapids	Milwaukee	New York	Pittsburg	Seattle	St. Paul
Boston	Cincinnati	Madison	New Orleans	Philadelphia	San Francisco	St. Louis	Syracuse



Federal Display Signs

The man who buys a Federal Sign gets INTRINSIC MERIT. He buys the highest grade material combined with the most expert mechanical design and workmanship. He buys a sign that will last a lifetime. Remember that **the first cost of a cheap sign is not the whole cost.** Federal Porcelain Enameled Steel Signs will not rust, fade or corrode and they have the highest reflective qualities. Our Design Department is at your service. Ask us for sketches to show your customers.

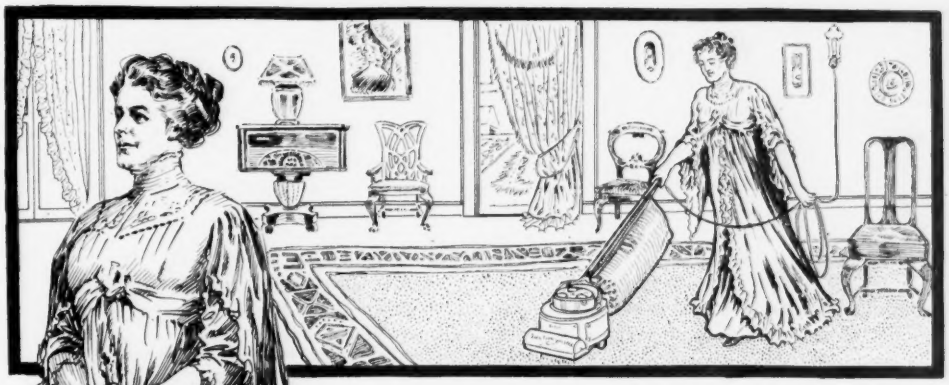
WRITE FOR BULLETIN No. 207

Federal Electric Company

Lake and Desplaines Streets, CHICAGO

People Who WANT the

HOOVER ELECTRIC SUCTION SWEEPER



No. 2. Your Own Mother

Ask your own mother about the Hoover Sweeper. Get a sample machine—let her try it—act upon her decision. She will advise you to accept our proposition.

There are thousands of mothers almost—not quite, of course—like yours, with husbands or sons only too willing to pay the low cost of a Hoover in order that the housework may be lessened. Broom slavery and servant domination are gone when the Hoover is installed in a house.

For the Hoover is an **improved** suction cleaner, light and portable, which gathers up matches, scraps of paper and dried mud as easily as it sucks up dirt. It is so light and easy to use that it is put to work every day—not once a week like the cumbersome vacuum apparatus. It is used whenever there's dirt or dust to clean up—every day. You know what that means in a month's current bills.

From the central station standpoint, the Hoover Electric Suction Sweeper is the **only** cleaning machine. It is low in first cost—which means you can put many of them out. It is thoroughly well made and absolutely guaranteed—which means that you don't have to worry about repairs or dissatisfaction. It is light in weight, easily carried upstairs or from room to room—which means that it will be used constantly.

Hoover Sweepers pay two profits—a profit on the machine and a profit on the current. You can have one or both—as you please.

We want Central Stations to demonstrate and handle our Sweepers
We want Central Station solicitors to sell them at a handsome profit.
We want department and hardware stores for agents

The Electric Suction Sweeper Co.

NEW BERLIN, OHIO

ENTERING UPON PROSPERITY IS EASY IF YOU HAVE THE KEY

HERE IT IS

SIMPLEX ELECTRIC HEATING DEVICES

ARE BUSINESS GETTERS

The Simplex Devices carry conviction to the housewife and not only links them to comfort and quality, but insures constant service wherever installed. The enamel method used only in the Simplex, seals heat where needed, giving a reliable even heat. Start right; get the standard of the market and let us furnish you with printed matter.

Write for Booklet "K"

SIMPLEX ELECTRIC HEATING CO.

Cambridge, Mass.

Monadnock Block, Chicago
612 Howard St., San Francisco

BUY BUCKEYE TUNGSTENS *Now*

B-E-C-A-U-S-E

Buckeye Tungstens are skillfully, carefully and honestly made.

Buckeye Tungstens are long of life and constant in service.

Buckeye Tungstens are carried in stock at all of branch offices and agencies.

BUCKEYE ELECTRIC CO.

CLEVELAND, OHIO

Flashing and Steady Burning

ELECTRIC DISPLAY SIGNS

Are Our Specialty

If you are after something original along these lines consult us. We assist Central Stations in selling Electric Signs.

Haller Sign Works (Inc.)

319 South Clinton Street

CHICAGO

A Hint *for* Hot Nights

FOLLOW THIS LEAD

On those Hot, Humid Nights when the Thermometer Sizzles and the Heat Sinks In, a Man Hates His Gas Arc. Sell

Benjamin Tungsten Arcs

to the Gas User while His Collar is a-wilt. You know him—you can sell him.

Catalogue No. T44

Benjamin Tungsten Fixtures

are Designed to Appeal to the Man who wants to get away from his Hot Lights. They're made in all sizes—1 to 6 lamps: 25 to 250 watts.

Consult our Bulletin No. 4.

Benjamin Electric Mfg. Co.

New York **Chicago** **San Francisco**

42 West Jackson Boulevard

The A. & W. Electric Sign Co.

Toronto CLEVELAND New York

The Central Station: The Business Solicitor: The Merchant:

Make it your business to get business and business will come

A. & W. ELECTRIC SIGNS

Appeal to the real live ones because they are business getters for modern merchants and business boomers for modern stations.

Many new and novel exclusive designed signs have recently been constructed which are only possible by the use of the new A. & W. flashing device. The accompanying cut of sign when in operation is a reproduction of a water fountain by electric bulbs. The bowl of fountain is produced by ruby lamps, the streams and drips by white lamps, and when in operation is a perfect reproduction of flowing water. Since January 1, 1909, five of these fountain signs have been installed, one in Cleveland, Rochester, Youngstown, Pittsburg and Erie.

Many new moving attractions have been installed by the A. & W. Company recently, such as moving automobiles, diving girls, waving flags, large steamboats in motion, sail ships on water, revolving balls, etc.

Send for Special Designs and Catalogue.

The A. & W. Electric Sign Co.

The Largest Electric Sign Works in the World

CLEVELAND, OHIO

TORONTO, ONT.—64-72 Farley Ave. **NEW YORK CITY—1370 Broadway**

"Motors in the Home"

Does that interest you?

The 1900 Washer and Wringer educates your residence customers to use motors in the home. That's a fact you can't ignore.

The 1900 Washer is simpler than a sewing machine—easier to operate than an egg-beater.

Women everywhere know this. They know it because our Washers have been advertised in hundreds of magazines and the ads have been read by millions of American women. No other manufacturer of a current consuming household appliance has done as much as we to popularize electricity in the home. We have records of dozens of cases where an electric service was put in *solely* to run a 1900 Washer.

Now, this means what?

It means that 1900 Washers are easy to sell—that they lead to a demand for *other* motor driven household appliances. It means that the time is ripe *right now,* during this hot weather, to inaugurate a 1900 Washer campaign just as you have in the past conducted electric flatiron campaigns.

The 1900 Washer is *easy* business, but it's not *small* business. The *profit* on one machine will almost pay your solicitor's salary for a week. The *satisfaction* of one machine will bring you three new residence customers every year.

Make us prove it Write for proposition No. 1 today.

1900 WASHER COMPANY

BINGHAMTON, NEW YORK

New Holophane Arcs
FOR TUNGSTEN LAMPS

Compare it in any way you may choose with any comparable unit on the market and you will find the **New Holophane Arc** superior in *every* respect.

Write for

NEW BULLETIN 51

Contains much valuable Illuminating Engineering Data.

Ready July 10th.

HOLOPHANE COMPANY

Sales Department

NEWARK, OHIO

New York Boston Chicago San Francisco

It Is
Our Business
To Get
New Business
For You

We can do it if you will give us a chance.

We have been doing it for other companies and know what we are talking about.

We don't serve our clients with luke warm syndicate matter. We give them absolutely individual treatment.

First we locate the cause, then the effects, and finally show the remedy.

That is what our Commercial Engineering Investigation consists of.

It shows you where your commercial department is weak and shows you how to strengthen those spots.

Then, if desired, we will "apply the remedy" we have prescribed.

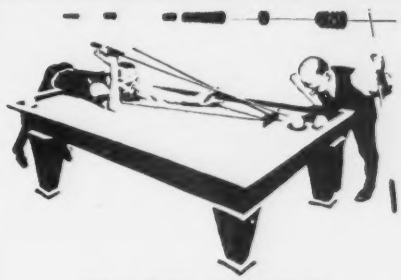
We don't give you valueless advice—we back our statements by work.

Let us hear from you in regard to this proposition.

It may mean money to you: Write us to-day.

C. W. Lee Company
West Street Building
New York

The managers of nine out of every ten billiard and pool rooms in your territory are "sore" because their lighting is unsatisfactory—either their bills are too high or the light is poor. Sell them the Bissell Billiard Fixture and you will not only make a profit but you'll make a friend and hold a customer.



HARD SHOTS

In billiards or pool an easy shot becomes hard if the light is poor or the fixture interferes with the players.

THE BISSELL BILLIARD FIXTURE

is up and out of the way: gives just enough light, properly distributed. No shadows—no bright spots on the table—no dingy corners—no glare in the players' eyes—just clear, soft, even, well-diffused light—and twice as much for the money as the ordinary outfit gives.

Write for descriptive circular. You need it.

F. BISSELL COMPANY
TOLEDO, OHIO

There is profit for you and profit for your customer in the Bissell Billiard Fixture. A well-lighted billiard and pool room is a profitable, long-hour customer. Don't think that inefficient equipment is profitable. It may burn more juice, but it burns fewer hours.

MAR 5 1909

SIGNS + BRAINS + PUSH

"ANY OLD SIGN WON'T DO"

Success in Sign Selling depends upon three things:
High-Grade Construction,
Original and Unique Designs, and
Aggressive Salesmanship

VALENTINE construction is electrically and mechanically ***right.*** In our product are combined skillful engineering, careful and conscientious workmanship, and long experience. Whether it is a Ten Thousand Dollar "Helmar Cigarette" sign on the Atlantic City Boardwalk or a three letter, single-faced "Bar" sign you can ***depend absolutely*** upon Valentine construction.

VALENTINE is always "different." The merchant to whom you submit one of our designs realizes at a glance that he is not getting a "stock" proposition. Another point: One Valentine sign ***always*** sells another, The reason is simple—Valentine designs have ***advertising value,*** which is what your merchants want. Think over that point.

VALENTINE salesmanship is co-operative. We don't sell signs ***to*** you—we sell them ***for*** you. We offer the central station Commercial Manager all our sales experience and ability—***free.*** If you have a hard customer to close (big or little), or a proposition that requires special knowledge of sign construction and costs not possessed by one of your own men, we will get on the job ***personally*** and give you the benefit of Valentine co-operative salesmanship. Write for particulars.

VALENTINE ELECTRIC SIGN COMPANY

Atlantic City, New Jersey

IT IS OUR BUSINESS
TO GET
NEW BUSINESS FOR YOU

We can do it if you will give us a chance.

We have been doing it for other companies and know what we are talking about.

We don't serve our clients with luke warm syndicate matter. We give them absolutely individual treatment.

First we locate the cause, then the effects, and finally show the remedy.

That is what our Commercial Engineering Investigation consists of.

It shows you where your commercial department is weak and shows you how to strengthen those spots.

Then, if desired, we will "apply the remedy" we have prescribed.

We don't give you valueless advice — we back our statements by work.

Let us hear from you in regard to this proposition.

It may mean money to you.

Write us to-day.

C. W. LEE COMPANY

West Street Building **NEW YORK**

MAR 29 1909

Wagner Electric

Manufacturing Company, St. Louis, Mo.

Single-Phase Motors

No One in the Electrical Field,

that is to say, no engineer or Central Station manager will question the statement that the Wagner Company manufactures *more* single-phase motors than *all other* electrical manufacturers in the United States.

This is so because

the Wagner Company was the first to build these motors, making a market where there was none before.

Wagner Single-Phase Motors

made single-phase power business *possible*. Understand, we *made* this business possible. We made it possible for Central Station managers to go out in their towns and build up a paying *day* load and we can do the same for you.

Wagner, Quality

Correspondence Invited. Please address the nearest office.

Atlanta, Empire Bldg.
Boston, 110 State St.
Charlotte, N. C., Trust Bldg.
Chicago, Marquette Bldg.
Cincinnati, First National Bank.
Cleveland, New England Bldg.
Denver, 1621 Seventeenth St.
Kansas City, Dwight Bldg.
Los Angeles, 326 South Los Angeles St.
Minneapolis, Security Bank Bldg.
Montreal, Bell Telephone Bldg.
New York, 50 Church St.
Philadelphia, Real Estate Trust Bldg.
Pittsburg, Farmers' Bank Bldg.
Portland, McKay Bldg.
St. Louis, 6400 Plymouth Ave.
San Francisco, Balboa Bldg.
Seattle, Pacific Block.
Sioux City, 515-517 Fifth St.

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Write us to-day.

C. W. LEE COMPANY

West Street Building **NEW YORK**

MAY 6 1909

The New G E Flatiron

This is the first word published here about a development that has been on the way for many months.

The new G E Iron is the result of the widest experience in manufacturing electric flatirons.

It is the product of the greatest facilities for research and experimentation ever devoted to this class of product.

The vital part of the new G E Iron is its heating unit just as in any electric iron. But that means much in this case. It means the certain success of the new iron with all users.

The new iron has a feather-weight, thin-leaf unit — paper thin — made of a new extra-high resistance metal.

The intimate thermal relation between the entire surface of the heating element and the body of the iron results in a rapid flow of heat from the element to the iron and keeps the iron practically as hot as the heating unit itself all the time.

The face of the new G E Iron is hot all over: on the point — at the edges — in the middle. The part that does the hardest work is always hottest.

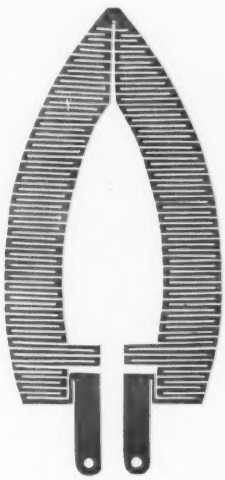
The New Heating Unit

The leaf unit in the new G E Flatiron conforms to the shape of the face of the iron.

It is a single, thin, leaf-like sheet of a new high-resistance metal cut in grid design to form a resistance path over the entire face of the iron.

The new leaf unit is as durable as the iron itself. The new metal is not oxidized by the heat of operation.

Every square inch of the leaf unit is effective, and the entire surface is in intimate thermal relation with the body of the iron.



The new G E Flatiron with the leaf unit is a quick-heating iron with ample heat-storage capacity.

The G E Leaf-Unit Iron is available in five-pound size, using 450 watts, and in six-pound size, using 550 watts. The finish is full polished, nickel plated.

The G E Leaf-Unit Iron is furnished with three standard forms of connector: the plain detachable plug, the indicating-switch plug and the permanently attached cord.

Sample orders will be shipped from stock. Order from nearest office.

General Electric Company

Principal Office: Schenectady, N. Y.

New York Office: 30 Church St. | **Chicago Office; Monadnock Building** | **Sales Offices in all large cities**

2127

TEAM PLAY

VALENTINE

ATLANTIC CITY

Valentine Electric Sign Company, Atlantic City

TEAM PLAY
IN SELLING SIGNS

When you get up against a "hard-shell" customer, why not let us help?

We are SIGN SALESMEN.
SIGN BUILDERS.
SIGN DESIGNERS.

We know signs—especially do we know how to sell them.

But instead of spending our energy selling signs **to** you, we offer to sell signs **for** you. See the difference?

Here's the Valentine proposition in a nut-shell:

If you have three or four or a dozen prospective sign customers which you don't seem able to quite close up, we will come right to your city and help you get the business.

Valentine Electric Sign Company, Atlantic City

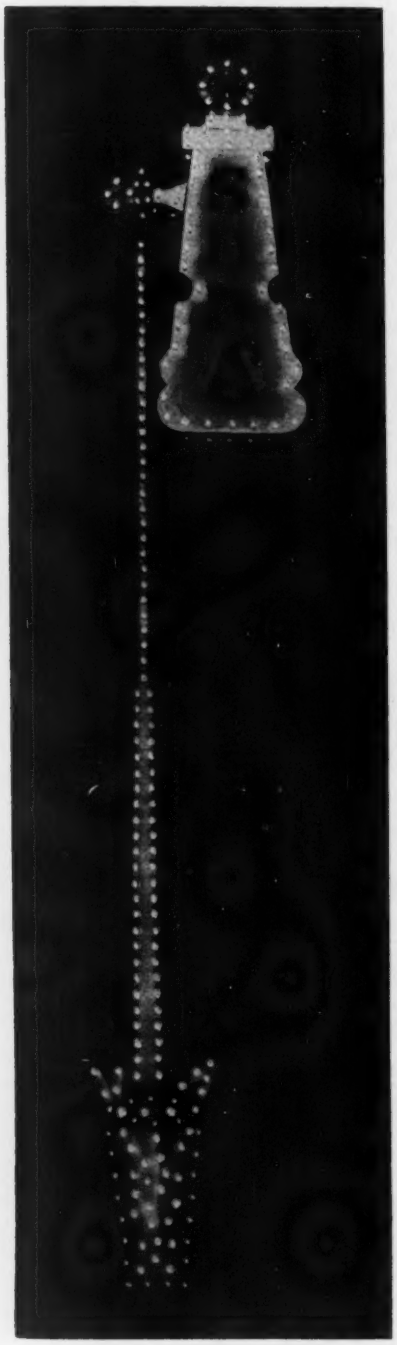
We will get on the job in person and bring to bear all the persuasiveness, sales ability and experience in our organization. We will add our specialized knowledge of signs, design and construction to your personal knowledge of local conditions and of customer's individual requirements. Between us, we will get the orders—and we'll both make money.

And understand this: Our offer is made to the small or moderate sized lighting company as well as to the big city company—it applies to small or moderate sized signs as well as to big signs.

Just because the Valentine name is upon those great Atlantic City Boardwalk $10,000 signs you read about, don't think we are not interested in a small one. We are. We want your business—be it large or small. We are ready and willing to take any reasonable amount of trouble—to do any reasonable amount of work—to prove to you that the easiest way to get signs on your circuits and the most satisfactory way of keeping them there is to use the Valentine——

TEAM PLAY
IN SELLING SIGNS

Valentine Electric Sign Company, Atlantic City



Brains in Valentine Signs

This design shows how we mix BRAINS, sheet steel, wire, receptacles and paint together so as to get striking results.

We recently erected this sign in Montgomery, Alabama. It represents a soda fountain 12 feet in height, set at the edge of the roof of the building shooting a stream of soda into a glass which is directly over the street entrance. The sign shows both ways, up and down the street, and is operated by a flasher. It is unique, clever, effective. It has ADVERTISING VALUE. Compels attention.

This is the kind of sign the merchants of your city will buy IF THE PROPOSITION IS PUT UP TO THEM RIGHT. We know how to design, make and SELL this kind of sign. Let us sell some for you.

Valentine Electric Sign Company

Atlantic City, New Jersey

IT IS OUR BUSINESS
TO GET
NEW BUSINESS FOR YOU

We can do it if you will give us a chance.

We have been doing it for other companies and know what we are talking about.

We don't serve our clients with luke warm syndicate matter. We give them absolutely individual treatment.

First we locate the cause, then the effects, and finally show the remedy.

That is what our Commercial Engineering Investigation consists of.

It shows you where your commercial department is weak and shows you how to strengthen those spots.

Then, if desired, we will "apply the remedy" we have prescribed.

We don't give you valueless advice — we back our statements by work.

Let us hear from you in regard to this proposition.

It may mean money to you.

Write us to-day.

C. W. LEE COMPANY

West Street Building **NEW YORK**

MAY 28 1909

WE ARE ON OUR WAY

We have left New York.—We are travelling.—We are moving to Newark, Ohio,—where the factory is.

We are concentrating in the interest of our customers and to promote prompter shipments and a better service.

Our branch offices continue as before, but all general business will be handled from the new address.

HOLOPHANE COMPANY

NEWARK, OHIO

New York Boston Chicago San Francisco

2-AGAINST-1
IN SELLING SIGNS

VALENTINE

ATLANTIC CITY

Valentine Electric Sign Company, Atlantic City

2-AGAINST-1
IN SELLING SIGNS

Here's our proposition in six words: WE WILL SELL SIGNS FOR YOU.

We will send to your city a $10,000-a-year salesman if necessary, who will work in co-operation with your solicitors, who will sell signs to your merchants, who will increase your revenue.

His time and the results of his work will not cost you a penny. This is not philanthropy on our part—it's co-operation. We want to sell signs. You want to sell current. By joining forces we can both sell our product more easily—both make more.

Will you co-operate?

The Valentine 2-against-1 systems of selling signs has proven itself a huge success. You supply the "inside facts," the personal understanding of local conditions and of your customers' individual requirements. We supply the experience, coupled with intimate, first-hand knowledge of sign design, sign construction and salesmanship. Together we can "clean up" your city in one quarter the time it would take you to canvass it alone—and it's safe to say that the signs we can sell together will be larger and consume more current than those your own solicitors sell. Think that over for a minute.

Valentine Electric Sign Company, Atlantic City

As to the signs themselves, 3 things enter into our product:

1. VALENTINE WORKMANSHIP, which means the utmost skill, care and conscientious attention to every detail of construction. Work in our shops is DONE RIGHT or it is never shipped. We have a reputation to uphold. Incidentally, we have the ability which comes only through long experience in electric sign building.

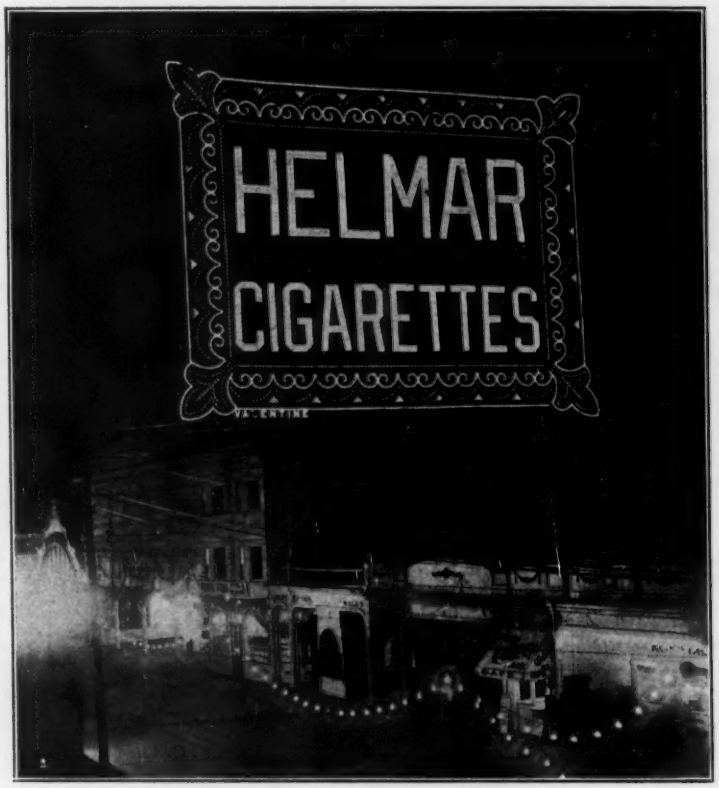
2. VALENTINE MATERIAL which means the very best of everything. We are such large users of electric sign material that we can and do maintain a very thorough inspection department which examines and tests everything we buy before accepting it from the manufacturer.

3. VALENTINE BRAINS, which means original, clever, striking ideas worked out in a thoroughly practical manner. Some sign-makers have clever ideas that aren't practical and some have practical ideas that are not clever. Valentine mixes originality and cleverness with sound common-sense and know-how. And that is what has made the name "Valentine" known to every central station and every national advertiser in America. The big sign buyers, like Anheuser-Busch, Morlein, American Tobacco Co., the Clysmic Water people, Gillette, the razor man, the Boston Garter Concern all use Valentine signs. The central stations controlled by Henry L. Doherty & Co.—or most of them—use Valentine Signs. George Williams, who is carded to present a paper before the National Electric Light Association Convention is a booster for Valentine Signs. The Easton "slogan sign" described in this issue of SELLING ELECTRICITY is a Valentine Sign. There's plenty of evidence to prove that Valentine workmanship, Valentine material and Valentine brains combine to make about the best signs produced. Ask our customers.

Now to get back to that 2-against-1 proposition—LET US SELL SIGNS FOR YOU. Let us send a man to your city to work side-by-side with your own solicitors. Let us help you to make your sign business a big profit-payer. We want to work WITH you and FOR you—not against you or around you in spite of you. We can help each other. Let us co-operate and let our motto be:

2-AGAINST-1 IN SELLING SIGNS

Valentine Elecrtic Sign Company, Atlantic City



When You Come to the N. E. L. A. Convention You Will See This Sign

This is only one of Valentine's famous Boardwalk signs. There are dozens of others.

When you come to Atlantic City, visit our factory. It's not a show place, but a shop. You'll find it littered with work—everybody busy as ants—probably there will be a night shift on duty You will get a good idea of the size and number of the signs we turn out when you see us at work.

Come in and get acquainted. Talk the situation over with us. Let us find out whether or not we can be of service in helping you sell signs.

Write the address in your memo book

VALENTINE ELECTRIC SIGN COMPANY
ATLANTIC CITY, NEW JERSEY

IT IS OUR BUSINESS
TO GET
NEW BUSINESS FOR YOU

We can do it if you will give us a chance.

We have been doing it for other companies and know what we are talking about.

We don't serve our clients with luke warm syndicate matter. We give them absolutely individual treatment.

First we locate the cause, then the effects, and finally show the remedy.

That is what our Commercial Engineering Investigation consists of.

It shows you where your commercial department is weak and shows you how to strengthen those spots.

Then, if desired, we will "apply the remedy" we have prescribed.

We don't give you valueless advice — we back our statements by work.

Let us hear from you in regard to this proposition.

It may mean money to you.

Write us to-day.

C. W. LEE COMPANY

West Street Building **NEW YORK**

JUN 14 1909

Burning the Candle at Both Ends

Too many Central Station Power Salesmen spend their nights in planning installations and their days in selling them. Let us do the night work—at no cost to you.

YOU can't "burn the candle at both ends" forever. The man who spends his days in the strenuous, nerve-racking labor of selling power is in no fit condition to make careful, accurate calculations at night. Cut out the night work!

"Put it Up to Crocker-Wheeler"

We will lay out the installations, do the figuring, compile the data, supply you tables of comparative costs,—and we will not charge one penny for the service. Our 62 engineers, designers and draughtsmen, with the Crocker-Wheeler Company's 21 years of successful experience behind them, are ready at your call. Tell them what the problem is and they will solve it. Of course you are competent to do this work yourself, but—why hesitate to profit by the brains of others?

Remember, all we ask in return is that you consider **C-W** motors in the installation.

Crocker-Wheeler Company

Ampere, New Jersey

Satisfaction

IN SELLING SIGNS

VALENTINE

ATLANTIC CITY

Satisfaction

IN SELLING SIGNS

That's what you want to receive and give—*SATISFACTION.*

You want your customers to be satisfied—to be proud of their Electric Signs, because you well know that a boastful sign owner does more to convert the skeptics and hard-shells than any amount of salesmanship.

You want to be satisfied, yourself, with the appearance, the construction and the current consumption of the signs on your circuits.

When you deal with VALENTINE, you and your customers both get satisfaction—not sometimes but every time. Design, construction, delivery and price are *RIGHT.*

But the *BIG* advantage you get when you deal with us is this:

We SELL SIGNS for YOU

Valentine Electric Sign Company, Atlantic City

We will send one of our experts to your city. He will go with your representative to call upon your merchants. He will *SELL SIGNS.* You supply the "inside facts", the personal understanding of local conditions and of your customers' individual requirements—we supply the experience, the knowledge of sign design and construction, and the sign-salesmanship.

And understand this: Our offer is made to the small or moderate sized lighting company as well as to the big city company—it applies to small or moderate sized signs as well as to big signs.

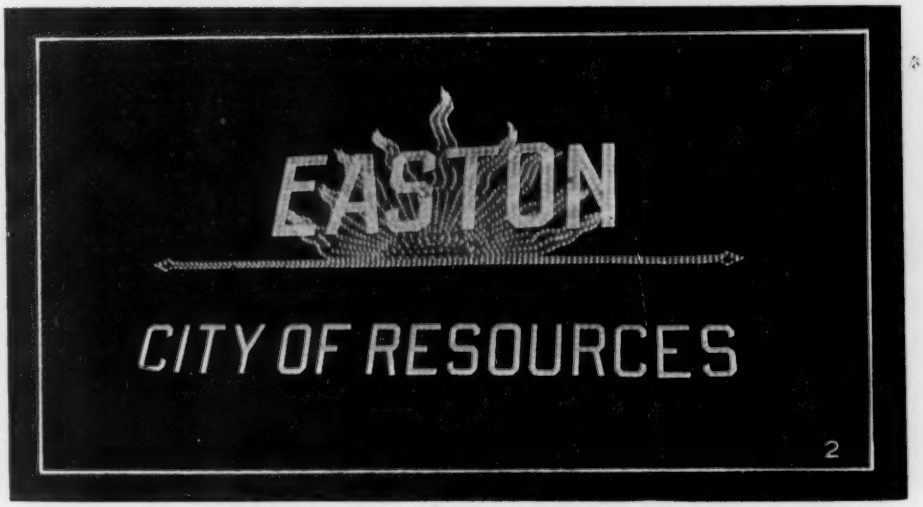
Just because the VALENTINE name is upon those great Atlantic City Boardwalk $10.000 signs you saw at the N. E. L. A. Convention, don't think we are not interested in small signs. We are. We want your business—be it large or small. We are ready and willing to take any reasonable amount of trouble—to do any reasonable amount of work—to prove to you that ours is the easiest way to get signs on your circuits and the most satisfactory way of keeping them there.

Co-operation between your representative and ours brings the business. We both sell more signs, larger signs, more profitable signs—and we give

Satisfaction

IN SELLING SIGNS

Valentine Electric Sign Company, Atlantic City



This Sign in Read from Six Railroads and Advertises the City of Easton, Pa.

The Easton (Pa.) Board of Trade and the Easton Gas & Electric Company wanted to boom their city as an industrial center. They asked Valentine to do the trick,

We built a sign 54 feet long and 45 feet high that talks loud about Easton—the green arrow shoots out, the sun looms up red and the sun's rays writhe and flash and die out as the words "Easton—City of Resources" break out.

That sign has already helped draw in one new industry, and it is talking Easton to thousands night and day.

Valentine sign-brains did that for Easton. We can do as much for you. We make all kinds of signs, but mainly "different signs."

The address is:

VALENTINE ELECTRIC SIGN COMPANY
ATLANTIC CITY, NEW JERSEY

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TO GET
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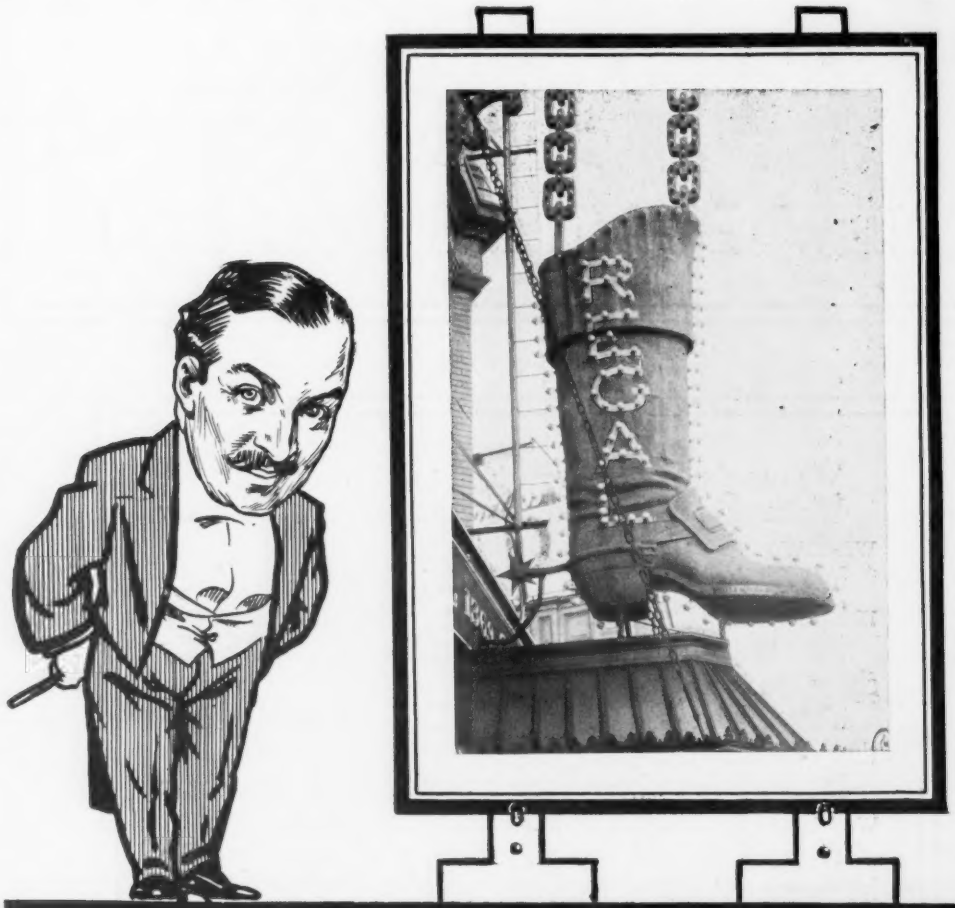
C. W. LEE COMPANY

West Street Building **NEW YORK**



COPYRIGHT, 1909, BETTS & BETTS

SIGNS THAT SELL

Here is a sign we designed for one of the largest National Advertisers in the world—a firm that demands *absolute results in advertising.*

We make signs for Regal Shoes, Huyler's Candy, United Cigar Stores and Cunard Steamship Line, not because we build them cheap, but because we are experts in *electric advertising*—because our signs are *electric salesman.*

You Want Your Customers to Buy That Kind of a Sign—Signs That Sell Goods

Our signs—big roof signs as well as transparencies—are studied not alone for originality but for *advertising appeal.* We have gained our reputation among the National Advertisers only because our signs have made sales.

Now—We Want Central Station Business!

We have opened a new department in charge of a man who knows central station needs and can satisfy them. We want to build SIGNS THAT SELL for *your* customers.

BETTS & BETTS

INCORPORATED

Electrical Advertisers **1360 Broadway, New York City**

LE N '09

TS & BETTS

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Steam-
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City